JOB CHARACTERISTICS AND JOB SATISFACTION AMONG NEW ZEALAND FARMERS, FARM WORKERS, AND AGRICULTURAL STUDENTS

A thesis submitted in partial fulfillment
of the requirements for the degree
of
Master of Arts in Psychology
in the
University of Canterbury

by

Bee M. Clark

University of Canterbury

1979

CONTENTS

ACKNOWLEDGEMENTS

The author wishes to thank Mr B.D. Jamieson for his supervision of this thesis. Thanks are also due to Mark Chignell for his invaluable assistance with the data analysis, to Mr Gerald Frengley of Lincoln College for arranging access to Diploma of Agriculture students, to Andrew Glennie for his advice and to Leanne and Donald Harley for aiding me in my data collection.

Special thanks are due to my parents, Roland and Betty Clark, for their invaluable advice and help, and to my colleague, Howard North, for his support and assistance throughout the year.

Thanks must also be extended to Mrs Willy van der Goot, Janna Greene and Mr Winton Bell for their help in the preparation of the final draft, and to all the farmers, farm workers and students who took part in this study.

ABSTRACT

The study was undertaken in order to investigate the importance of job dimensions and individual characteristics in the job satisfaction of samples of New Zealand farmers, farm workers and agricultural students and also to test Hackman and Oldham's Job Diagnostic Survey in a new setting. Questionnaires were given to 201 male subjects from five occupational groups; high country farmers, low country farmers, high country farm workers, low country farm workers and agricultural students. A significant occupation main effect was found among groups, with farmers, and particularly high country farmers, scoring significantly higher on most variables. In comparison with results from previous studies, scores were high for all occupational groups. The dimensionality of the jobs was investigated with a moderate degree of intercorrelation being found. Growth need strength was found to have a definite moderating effect, but not necessarily for the predicted relationships. It was concluded that the model was inadequate in the present context.

CHAPTER ONE

INTRODUCTION

Until the 1950's the Scientific Management perspective (Taylor 1911) was the generally accepted one for job design, with its basic principle being that jobs should be simplified, standardized and specialised to as great a degree as possible. The worker was seen as little more than an extension of the machine with which he worked and his job was designed accordingly. Taylor had hoped that rather than reducing a person to a "mere automaton, a wooden man" his methods would enable the worker

> "to do a much higher, more interesting and finally more developing and profitable kind of work than he was before able to do."[1]

This ideal frequently proved unattainable and due to such resulting problems as general dissatisfaction, high absenteeism and turnover rates, and sabotage on the parts of often unmotivated and bored workers the full economic savings expected from the system were seldom realised.

The Hawthorne studies which highlighted the human element of work design led to the development of the human relations movement in the 1930's with its concern for worker satisfaction and emphasis on leadership and personal

---

1. Taylor F.W. The Principles of Scientific Management in Weir M. Job Satisfaction, Fontana/Collins 1976 P.68

relationships. However, it was not until the 1950's that a trend became apparent away from the Scientific Management approach to one of job enlargement/enrichment in an effort to make jobs more complex, challenging and interesting. The rationale behind this view is that greater motivation and satisfaction will come from enriched jobs leading to higher and better quality production, low turnover and absenteeism.

Frequently, this does seem to be the case. The most common generalisation of the popular job enrichment literature is that enriched jobs tend to be higher satisfiers than non-enriched jobs. However there is by no means a consensus of opinion on the subject. In his review, Fein (1974) argues that most of the job enrichment studies are really the results of common-sense work redesign or have occurred among such a select group of employees that the success is independent of its content. Not enough is known about what job characteristics are really important, or about the effects and influence of individual employee characteristics. Sims, Szilagyi and Keller (1976) discuss the situation as follows:

> "Managers and scientists alike have a vested interest in understanding how job characteristics relate to individual productivity and job satisfaction. Development of this interest has been hampered, however, by the lack of a conceptual and theoretical basis for the measurement of job characteristics. As a result, there is little agreement regarding the definitions of job

> characteristic components so they can be generalized across many different samples." (P.195)
>
> In addition, Sims and Szilagyi (1976) state;
>
> ".... we need to know more about the theoretical underpinnings of the job enrichment movement if we are to achieve understanding as to why the system works in some situations and fails in other situations." (P.212)

Developments in this area were particularly stimulated by Hackman and Lawler's (1971) research and by subsequent studies which have been concerned with the problems of analyzing what job dimensions and individual characteristics are important in determining satisfaction with a job. Hackman and Oldham's Job Diagnostic Survey (JDS) (1974, 1975) is one of the major methodological developments in this area, measuring, as it does, job characteristics, psychological states and personal and work outcomes.

The study reported in this thesis used the JDS in a hitherto seldom researched area of occupations, that of farmers and farm workers. Not only was this important as a test of the JDS in a different setting, but it was of interest to see how the farmer/farm worker perceives his job, what dimensions are important in it and how satisfied he is with its various aspects.

The remainder of the report takes the following form. In Chapter Two, initially the literature on job dimensions and individual characteristics is reviewed (with particular attention being given to Hackman and Oldham's Job Diagnostic

Survey (1974,1975)) while the second section of the chapter looks at research on job satisfaction in a rural context. This is followed by a chapter on the research rationale. Chapter Four deals with the population and samples, the research instrument, and the research procedure. Chapter Five deals with the results which are in turn discussed in Chapter Six. The study concludes with a summary and conclusions chapter, followed by references, and appendices containing tables and copies of the research questionnaire.

CHAPTER TWO

LITERATURE REVIEW

Job Dimensions and Individual Characteristics

The first major study of the relationship between job characteristics and employee reactions was that carried out by Turner and Lawrence (1965). It was an attempt to provide some systematic data on how differences in jobs affect employees. In addition, it also yielded information on the ways different groups of people were affected by different types of jobs. Turner and Lawrence developed measures of six job dimensions or 'requisite task attributes' which were expected to relate positively to employee satisfaction and attendance:

(1) Variety

(2) Autonomy

(3) Required social interaction

(4) Opportunities for social interaction

(5) Knowledge and skill required

(6) Responsibility

It was found that these dimensions were very closely interrelated. From the results obtained, Turner and Lawrence derived the Requisite Task Attribute Index (RTA Index) which was used in ascertaining the relationships between the nature of jobs and worker satisfaction and

attendance. The authors' expectations that employees working on jobs which were high on the RTA Index would have higher job satisfaction and lower absenteeism were not fully supported. The expected relationships held only for workers from factories in small towns, whereas for workers in larger urban settings, reported satisfaction was less when jobs where high on the RTA Index, and in addition for this latter group, the index was unrelated to absenteeism. It was argued by the investigators that the obtained differences were substantially modified by differences in the cultural backgrounds of employees.

Hulin and Blood (1968) attempted to explain this result by contending that the response to work is conditioned by the degree of integration with middle-class work norms. Integrated workers feel personally involved in work and value such intrinsic characteristics as variety, responsibility and autonomy. Alienated workers, on the other hand, shun such characteristics and view work simply as a means for earning money to pursue their extra-work interests, thereby possessing what Goldthorpe, Lockwood, Bechhofer and Platt (1968) would term an instrumental orientation to work. Hulin and Blood constructed a model which proposed that the higher the alienation from middle class norms, the weaker the relationship between enriched jobs and employee satisfaction.

As a consequence of these studies it seemed that the generality of the hypothesis that enlarged jobs lead to improved satisfaction, attendance and performance on the

job must be called into question. Obviously while an enriched job may be optimal for some employees, a simplified job may be more appropriate for others.

Subsequently a good deal of research on job dimensions and individual characteristics has been generated. Possibly the most influential study in this field was that of Hackman and Lawler (1971). They chose four of the Turner and Lawrence requisite task attributes which they believed comprised the core characteristics of jobs, and which would allow individuals to obtain meaningful personal satisfaction from the jobs themselves. Items from Turner and Lawrence's scales were adapted to provide measures of these four attributes, i.e. autonomy, variety, task identity and feedback. Hackman and Lawler specified the conditions under which jobs would facilitate the development of internal motivation for effective performance and described jobs on these four core dimensions. They also measured the strength of desire for the satisfaction of what they termed, "higher order" needs (e.g. obtaining feelings of accomplishment, personal growth). They predicted and found that when jobs were high on the four core dimensions, employees who were desirous of higher order need satisfaction tended to have higher motivation and high job satisfaction, to be absent from work less frequently and to be rated by supervisors as doing higher quality work. Brief and Aldag (1975) successfully replicated these findings, in particular supporting the moderating influence of higher order need strength. Studies by Barnes (1975) and Hackman and

Oldham (1975) also provide support for this finding.

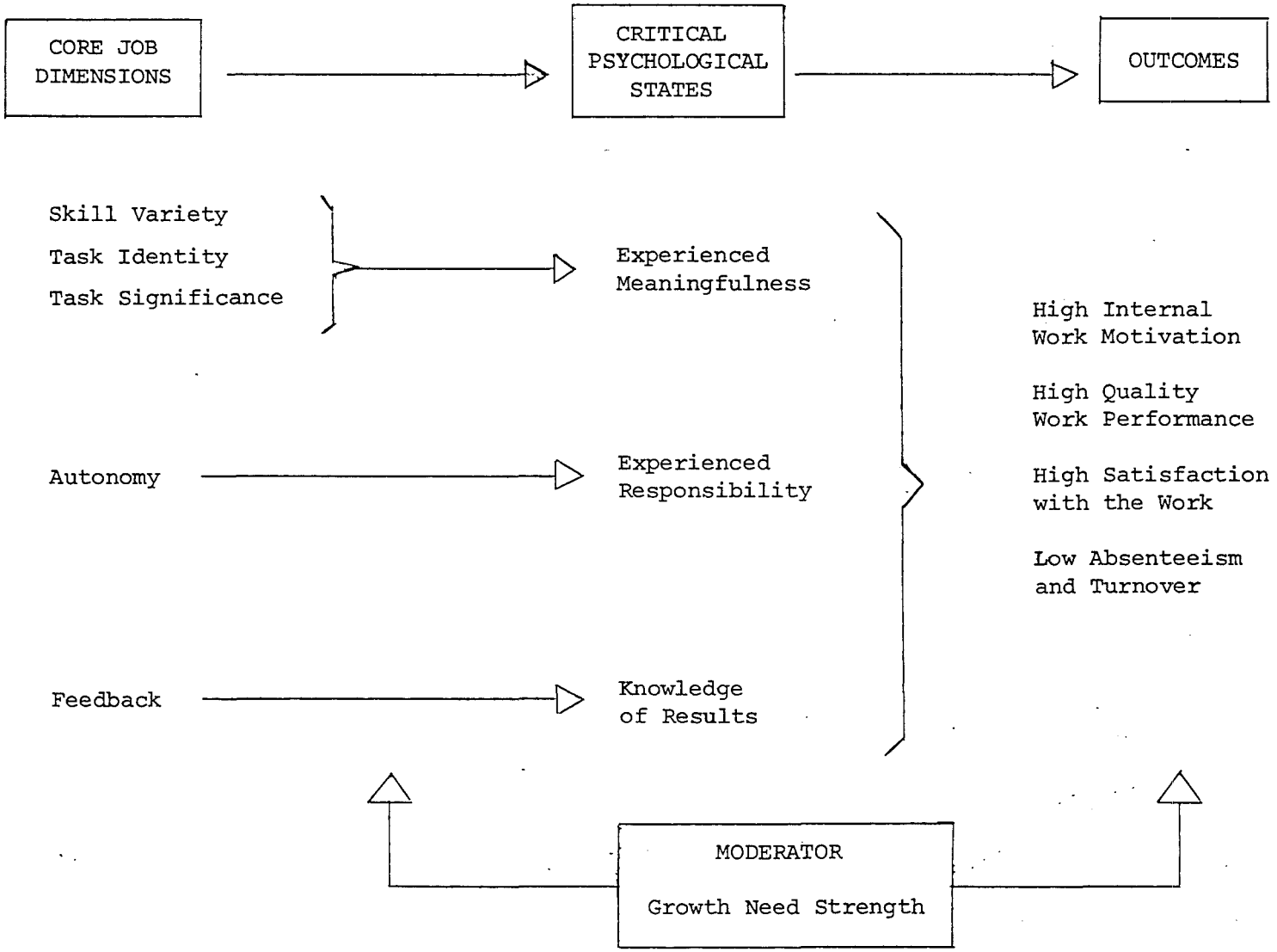
Although the importance of individual characteristics on the effects of job dimensions is unchallenged, subsequent research has led to differing views on the actual numbers of core job dimensions which are important. Hackman and Oldham (1975) developed the Job Diagnostic Survey (JDS) to measure the relevant variables. They describe the JDS as

> ".... an instrument designed to be of use both in the diagnosis of jobs prior to their redesign, and in research and evaluation activities aimed at assessing the effects of redesigned jobs on the people who do them." (P.159)

In it they added a measure of task significance to Hackman and Lawler's four core dimensions. Hackman and Oldham proposed that positive personal and work outcomes (high internal motivation, high work satisfaction, high quality performance, and low absenteeism and turnover) are obtained when three critical psychological states (i.e. experienced meaningfulness of the work, experienced responsibility for the outcomes of the work and knowledge of the results of the work activities) are present for a given employee. All three of the psychological states must be present for the positive outcomes to be realised. The model is shown in Figure 1.

The theory proposes that these critical psychological states are created by the presence of five "core" job dimensions. Experienced meaningfulness of the work is enhanced primarily by three of the core dimensions:

Figure 1 THE JOB CHARACTERISTICS MODEL OF WORK MOTIVATION



From: Hackman, J.R. and Oldham, G.R. (1975).

skill variety, task identity and task significance. Experienced responsibility for work outcomes is experienced when a job has high autonomy. Knowledge of results is increased when a job is high in feedback (See Figure 1). The "motivating potential" of a job in terms of the core job dimensions is reflected in a summary score, obtained from values for each dimension as measured by the JDS.

$$\text{MPS (Motivating Potential Score)} = \left[\frac{\text{skill variety} + \text{task identity} + \text{task significance}}{3}\right] \times \text{Autonomy} \times \text{Feedback}$$

Thus, an increase in any of the core dimensions will increase the MPS, but if any of the three major components of the MPS is low, the resulting MPS must also be low.

A job high in motivating potential will not affect all individuals in the same way. Therefore Individual Growth Need Strength (GNS) is shown in Figure 1 as a moderator of the other specified relationships, i.e. it moderates the relationship between the core dimensions and the satisfaction, performance and motivation of the worker. Oldham, Hackman and Pearce (1976) found that employees who have a high GNS and who also are satisfied with the work content, respond more positively to enriched jobs than do those with low GNS and who are dissatisfied. Oldham, Hackman and Stepina (1978) have added Context Satisfactions (pay, security, supervision, opportunities for growth) as a moderator. When employees are not satisfied with the work context, their abilities

to respond positively to a job high in motivating potential should be diminished, because their attention may be distracted from the work itself to these problems.

Sims, Szilagyi and Keller (1976) conducted two studies which investigated a revised version of the Hackman and Lawler characteristics instrument, and concluded that a six factor solution was the most readily interpretable and meaningful structure for each sample. These factors were; variety, autonomy, task identity, feedback, dealing with others and friendship opportunities. This study provides the best evidence that the task design construct under study has complex dimensionality and that the core dimensions can be empirically differentiated from each other.

Sims and Szilagyi's (1976) study gave strong support for Hackman and Lawler's conclusion that;

> "All in all, ... a strong case (is made) for the moderating effect of individual higher order need strength in determining the effects of job characteristics on employee behaviour and attitudes at work" (P.280)

Sims and Szilagyi saw the job characteristics as not necessarily being an exhaustive set of dimensions that describe the process of job enrichment, but rather as an added insight into the need to consider individual characteristics and employer attitudes and performance.

Dunham (1976) conducted a study in which he examined the dimensionality of task design. It was shown that the most parsimonious factorial solution was a single factor

one representing job complexity. Alternatively a four factor solution was proposed, with the task variety and autonomy items collapsing to form a common factor. He also compared a compensatory, additive model for combining the several measures to a non-compensatory model (Hackman and Oldham's MPS measure). On the basis of his results, Dunham suggested that an additive, compensatory model for combining elements of task characteristics should be considered along with complex, non-compensatory models.

Oldham, Hackman and Stepina's (1978) finding that the five core job dimensions are moderately intercorrelated supports previous research (Dunham 1976, Hackman and Lawler 1971, Hackman and Oldham 1974, 1975, Pierce and Dunham 1978). They pointed out that this degree of intercorrelation was hardly unexpected if it was assumed that complex, challenging jobs are often complex in a number of ways, and that there is no reason to expect that the job dimensions would, or should be completely independent. The interrelationship among the dimensions does not diminish their usefulness as separate dimensions in diagnostic and evaluative activities.

This lack of empirical independence among the job dimensions is consistent with Dunham's (1976) study and another factor analytic study (Dunham, Aldag and Brief 1977) which demonstrated that the JDS scale items sometimes collapse empirically to form two, three or four job dimensions. Oldham, Hackman and Stepina (1978) concluded that the differences in the dimensionality of the job characteristics seemed to depend upon the nature of

the sample investigated. However, the specific sample characteristics responsible for these dimensionality differences have not, as yet, been established. Pierce and Dunham (1978) suggested that these differences might be attributable to the efficacy of the instrument, the generic character of the jobs being measured, subject characteristics, or the basic nature of perceived measures of job characteristics.

Dunham, Aldag and Brief (1977) suggested that the development of objective measures of task design is of greatest importance, for once obtained it would be possible to define the links from these to worker responses.

Another important point in considering the job dimensions present in a job and their impact was discussed by Hackman and Lawler (1971). They emphasized that it is not their objective state which affects employee attitude and behaviour, but rather how they are experienced by the employees. Regardless of the amount of feedback (or variety, or autonomy or task identity) a worker really has in his work, it is the quantity that he perceives that he has which affects his reactions to the job. In a recent paper, Dunham (1977) raised another important, previously neglected, point - that of the moderating effects of the organization. Employees may or may not focus on task design as a function of nontask elements in the work environment. Thus, although an employee's job may have an expanded task design, the worker does not experience the psychological aspects

(i.e. intrinsic outcomes) of expanded tasks because of distracting environmental factors, and, as Hackman and Lawler pointed out, the worker can respond favourably to expanded jobs only if he is aware of receiving valued outcomes.

It has been shown that the variables in the equation relate to one another generally as predicted by the theory (Hackman and Oldham 1976, Oldham et al 1976, Umstot, Bell and Mitchell 1976). Oldham, Hackman and Stepina (1978) reported that the core dimensions related positively and substantially to the three psychological states, general satisfaction, growth satisfaction, internal motivation, and (to a lesser extent) behavioural measures of attendance and performance. Relationships between the job dimensions and outcomes tended to be stronger for individuals who were well satisfied with the work context and who had strong growth needs than for employees low on these variables. They also found that there were strong relationships between the core job dimensions and the corresponding psychological states, except in the case of task identity. There was also a strong positive relationship between the outcome measures and the core dimensions and psychological states.

It was indicated by the between subject analyses that the job dimensions, psychological states and outcome measures are generally independent of the GNS measures. As these relationships were substantially higher in the between job analyses, Hackman, Oldham and Stepina suggested that this may be due to the emergence of a

congruence between the employees' needs and the psychological composition of jobs.

Umstot et al (1976) reported that although the MPS was positively related to satisfaction and performance for all subjects, it provides stronger relationships for those employees with high GNS scores.

Oldham, Hackman and Stepina (1978) present norms for the JDS which they have developed for a wide cross section of the American population. In their study they used a slightly modified JDS in which context satisfactions (as mentioned earlier) were added to growth need strength as moderating variables. In the study they found that reliabilities might not be sufficiently high to justify the use of the JDS in diagnosing the jobs of single individuals. However, with average scores for groups of workers, scale reliabilities were more than adequate. This study gave a wealth of information on the JDS.

The results suggested that the higher the job's hierarchical level, the higher the job on the core dimensions. This general trend also existed for the satisfaction, motivation and GNS measures.

It was found that employees who worked for organizations that are part of larger firms were more highly satisfied and motivated than employees in self-contained organizations. However no difference was found in their GNS.

Age was shown to have an important effect. The highest internal motivation and satisfaction scores were

for the older age groups. However, 20-39 year olds had the highest GNS and those in the 50-59 and 60 plus age groups had the lowest.

Education also was of importance. Those with the higher levels of education had higher job dimension, MPS and GNS scores.

It was found that high MPS scores (indicating challenging and complex jobs) were typically found in:

(a) small organizations.
(b) organizations with their physical facilities dispersed through the country.
(c) organizations which are part of larger organizations.
(d) high level jobs.
(e) non unionized jobs.
(f) salaried jobs.

These high MPS jobs tended to be filled by highly educated males over 40 years of age.

In conclusion, it seems that this is an area which is still far from being fully understood. The largest problem is that of the number of dimensions which are relevant. Sims, Szilagyi and Keller (1976) suggested that more than four are necessary, Dunham (1976) claimed that at least two are not empirically different and that a single one may be more valid, and those in the middle support Hackman and Lawler's (1971) four dimension model, although Hackman and Oldham (1974,1975) suggested that a fifth dimension of task significance may be important. Oldham, Hackman and Stepina's conclusion that the dimensionality of job characteristics depends on the

peculiarities of the sample investigated, serves to settle the debate a little, but noone has yet isolated the factors which cause these differences. Other important points are the mediating effects of the organization and its environment, and the influence of growth need strength as a moderator. There is also the issue of how job dimensions are actually experienced - to what extent should perceptual rather than objective measurement techniques be used?

As the understanding of these problems is basic to the field of job satisfaction, and more specifically to any work in job design, it is a particularly important area of research. It is desirable that the existing conceptual and theoretical framework is clarified and developed as far as possible. At present it seems that a particularly relevant line of research might be to apply the JDS to as many different samples as possible in order to be able to isolate the factors which are responsible for differences in dimensionality between samples.

Job Satisfaction in a Rural Context

The area of job satisfaction with rural workers is one that has been almost totally ignored by researchers of any sort, whether they are psychologists, sociologists or agriculturalists. Considering the importance of farming to many economies, (and most especially to the New Zealand one), and also considering that so much research has been done on job satisfaction in considerably

less important industries, this initially seems a matter for some surprise.

This dearth of research is probably best explained by the fact that in the Western world, farming is an industry composed largely of relatively small individual enterprises. In New Zealand, for example, the majority employ no more than one man apart from the farmer, and very rarely more than five or six. Thus, there are no large corporate enterprises, no mass of labour whose satisfaction, and therefore productivity, can be influenced by management and job design research and experiments. Individual farmers may well analyse what they think are the sources of job satisfaction and job dissatisfaction for their employees and design their work patterns accordingly, but it will profit the farm employer little to carry out or instigate a large scale research programme.

Researchers in agricultural colleges may be prompted to conduct some studies, particularly at times when there is a shortage of farm labour, but even then research is often considerably less sophisticated than that carried out by many psychologists, and it is aimed at the farmer and his immediate staffing problems.

There has been a little work by sociologists in the area. Steeves (1969) concerned himself with the contrast in job satisfaction between the farm and non-farm work context and concluded that neither occupational sector may be any more dissatisfied than the other. He sees the important factor to be the degree of integration of the worker into either setting. He postulated that

those who are "in and out" of agriculture tend to be the most dissatisfied. They, together with the aged, who are presumably making shifts in their enterprises in preparation for retirement seemed to be the most dissatisfied of all farm residents.

Gasson (1974) conducted a survey among farmers in East England which, although not a job satisfaction study per se, produced results which do have implications for any studies which are. Her results suggest that while farmers as a whole bring a predominantly intrinisic-expressive orientation to the job, lower status farmers particularly emphasise independence, middle status farmers place more stress than others on social, while those of the highest socio-economic status are the most business orientated group.

In New Zealand there has been a good deal of interest in the problems of farm labour, and consequently a little research on job satisfaction with farm workers, though never with farmers. This research has largely been carried out by agricultural researchers from Lincoln College, and seldom by psychologists.

On the whole their surveys are concerned, not with the psychological factors, but rather the practicalities of a farm worker's lot - his job conditions, house, hours of work, wages, social amenities, and assessment of his boss, in an attempt to solve the problem of shortage of farm labour (Morris and Cant 1966, McClatchy 1966, Cant 1967). In only one case was an attempt made to look at the problem from a psychological perspective. Cant and

Woods (1968) conducted a study designed to identify and measure factors which make farm employees satisfied or dissatisfied with their employment. They drew on the methods and results of Herzberg (1959) and adapted this into a suitable framework. They looked at 10 factors:

(1) Wages.

(2) Living conditions.

(3) Terms of employment.

(4) Job training.

(5) Social facilities.

(6) Farmer enthusiasm.

(7) Status.

(8) Interpersonal relationships.

(9) Recognition.

(10) Closeness to town.

Questionnaires were administered to 80 Lincoln College, second year, Diploma of Agriculture students who had completed a two and a half year period of pre-entry farm training. The subjects were all male, 18-30 years old, with a minimum educational qualification of School Certificate. In the study each student rated the "best" and "worst" farms that they had worked on on a variety of 10 point scales.

From the results a "man management" factor emerged as the most important one. It was concluded that;

> "... those farms with the most serious labour problems are likely to be ones where the employee lacks status, receives little recognition for work well done and gets on badly with the farmer." (P.27)

Furthermore, it was noted that wages were seen as more important on the best farms, status and recognition on the worst ones. Thus, it was concluded that the

> "... ability of the farmer to handle labour is the key to the manpower retention problem." (P.32).

and that

> "... the results suggest that dimensions similar to those identified by Herzberg were associated with job satisfaction and dissatisfaction among farm employees in New Zealand." (P.29).

This last study serves to shed a little light on the job satisfaction of New Zealand agricultural students as farm employees. However, it ignores the non student sector of farm labour and the results are not necessarily generalisable to this sector.

It must be concluded that the job satisfaction of rural workers is a much neglected area, with the few studies which have been carried out in it providing little basis for future research.

CHAPTER THREE

RATIONALE

It was decided to undertake a study which used Hackman and Oldham's Job Diagnostic Survey (JDS) to investigate the job satisfaction of farmers and farm workers. Oldham, Hackman and Stepina (1978) have established JDS norms across many different occupational groups, but not for farmers or farm workers, and it was therefore thought that it would be of interest to see what results would be obtained for this group and how the results would compare with those of the American studies.

The sphere of agrarian job satisfaction is a comparatively unresearched one, both in New Zealand and in the rest of the world. Much is presumed about what farmers and farm workers think of their jobs, and about their general personality characteristics. However, these presumptions are little more than unvalidated stereotypes and will remain so until studies have been conducted on how farmers and farm workers view their jobs, and how their individual characteristics and needs affect their perceptions of job characteristics.

This would seem to be a particular area of importance in New Zealand because of the vital place of

farming in the country's economy. In 1977 the GAP (Gross Agricultural Product) constituted 15.8% of the GNP (Gross National Product) whilst Agriculture's share of export income was about 70% ($2,101.1 million).

The farming industry is also a substantial employer. At 30th June, 1976 the total number of persons working on farms was 124,628. Of these 53,787 were working owners, leaseholders and sharemilkers; 37,578 permanent paid employees; 9,469 paid casual employees, and 23,794 unpaid family members.

Farmers and farm workers are therefore a very large group in the New Zealand work force, and so their work attitudes and job satisfaction would seem to warrant study. With the establishment of a New Zealand Farm Workers' Union in recent years the question of farm labour is receiving closer attention than ever previously, creating a heightened awareness of work conditions and the more extrinsic aspects of farm employment. However, despite the attention that is consequently being given to the more mundane problems of farm workers, farm labour is becoming progressively more difficult to obtain. Obviously agrarian life is losing some of its appeal for the farm worker. Two of the more obvious reasons appear to be low pay (compounded by the myth of the "free house" - in reality a great cost as it makes it difficult for the worker to ever buy his own house or even gain any equivalent asset), and isolation. It seems that the traditional good life is losing out to the higher wages and faster pace of life in the city. In view of this it

is of particular interest to see how the farmer and farm worker perceive their jobs, and especially their more intrinsic aspects.

It was anticipated that their scores on the variables measured would be very different from those found for previously studied populations. Apart from the differences that may possibly occur because of basic cultural differences between New Zealand and American populations, there are likely to be large differences between town and country populations. Turner and Lawrence (1965) and Blood and Hulin (1968) concluded from their research that rural workers (as with those working in factories in small towns) are more integrated with middle class norms than urban workers, and therefore feel personally involved in work, as well as valuing such intrinsic characteristics as variety, responsibility and autonomy. Taking a straight line extrapolation from this, one can hypothesise that the smaller the community in which one lives, the more extreme this integration with middle class norms will be. Thus, it was felt that the farmer or farm worker is presumably very highly integrated with middle class norms. Consequently, if he is at the most integrated end of the scale, there should exist a strong relationship between enriched jobs and satisfaction. It was hoped that this study would determine if the reaction of the farmer or farm worker is dependent on the particular kinds of satisfactions valued. Basically it was expected that he would rank higher order satisfactions more highly than the average

urban worker does, and so the core job dimensions would be of greater importance to him.

This was to be primarily an investigative rather than a comparative study, and therefore its main aim was to gain some insight into the job satisfaction of farmers and farm workers which could serve as a basis for future research. The study should also prove of value in that it uses, and therefore tests, the JDS in a hitherto unresearched occupational sector.

CHAPTER FOUR

METHOD

Population and Samples

The sample of 201 male subjects was composed of three distinct groups: farmers, farm workers and agricultural students. The first two groups were further divided into; a) those who farmed or worked on extensively farmed hill or high country properties, and b) those who farmed or worked on intensively farmed low country properties. It was decided to have high and low country samples because it was thought that differences may well exist between the two groups due to factors such as isolation and type and scale of farming. This is generally accepted as a feature of Canterbury farming.

The low country farmers (N = 50) and the low country farm workers (N = 25) were largely drawn from the foothills edge of the Canterbury Plains (between the Rakaia and Rangitata Rivers), and the high country farmers (N = 25) and farm workers (N = 21) from the Mid-Canterbury High Country (chiefly from the area around the Rakaia, Ashburton and Rangitata Gorges), and the Central Otago High Country, in the region of the Dunstan Mountains. Geographical convenience dictated the choice of these areas, and to avoid bias in the sample, as many

farmers as possible were visited in any given area. The method of recruitment will be dealt with in the Procedure section.

The age range for the farmer groups was from the 20-39 years group to the over 60 years group, with the majority of the low country farmers being spread evenly between 30 and 60 years of age, and the majority of the high country farmers being between 30 and 40 years old. Farm workers ranged from under 20 to 60 years of age, with the majority falling into the 20-30 age group.

There was quite a range in educational levels. Two farm workers, six of the low country and two of the high country farmers had received only a primary education. Fifteen of the high country farm workers had finished their formal education at secondary level, and five of them had gone on to some form of tertiary education. For the other groups the numbers were about 50% attaining a secondary level of education, and 50% a tertiary level.

The low country farmers had farms averaging about 200-250 hectares of flat, high producing land, mostly with sheep, but with some cattle and cropping. Most of these farms were in a high rainfall area where irrigation was unnecessary.

The hill-high country sample was not quite as homogeneous, ranging as it did from hill farms of 800-1,200 hectares of relatively easy terrain to extremely rugged and isolated stations of 40,500 hectares. However, in this group all the farming was extensive rather than intensive.

The farm workers were fairly diverse, with their varying degrees of education, and also particularly of agricultural experience. Some were saving to buy a farm, others waiting to inherit one or progress to a manager's job, while still others were perennial labourers. The majority worked as general farm hands, but some had more specific jobs, sometimes employed as tractor drivers, shepherds or musterers. This sample should be a fairly representative cross section of New Zealand farm labour.

Managers were not included in the study, as they do not fall readily into either the farmer or farm worker category - they would really require a group of their own.

The agricultural student sample was composed of 80 male Diploma of Agriculture students from Lincoln College, all of whom had had at least two years of practical farming experience on a variety of farms. They were all in the 18-30 age range.

The Research Instrument

The Job Diagnostic Survey (JDS) (Hackman and Oldham, 1974,1975) is an instrument designed to be useful both in the diagnosis of jobs prior to their redesign, and in research and evaluation activities that attempt to assess the effects of redesigned jobs on the employees who perform them. The instrument itself is completed by employees who work on any given job, and provides measures of (a) several specific job characteristics (e.g. autonomy, skill variety, task significance),

(b) the degree to which employees are psychologically "ready" to respond to these characteristics and (c) several personal and work outcomes (e.g. general satisfaction, high internal work motivation, high quality work performance), (d) the strength of the respondent's desire to obtain "growth" satisfactions from his or her work.

The specific measures obtained from the JDS are described below.

1) Job Dimensions. The JDS provides measures of the five core dimensions shown in Figure 1 which are defined as follows:

Skill Variety. The degree to which a job requires a variety of different activities in carrying out the work, which involve the use of a number of different skills and talents of the employee.

Task Identity. The degree to which the job required completion of a "whole" and identifiable piece of work, i.e. doing a job from beginning to end with a visible outcome.

Task Significance. The degree to which the job has a substantial impact on the lives or work of other people, whether in the immediate organization or in the external environment.

Autonomy. The degree to which the job provides substantial freedom, independence, and discretion to the employee in scheduling the work and in determining the procedures to be used in carrying it out.

Feedback from the Job Itself. The degree to which

carrying out the work activities required by the job results in the employee obtaining direct and clear information about the effectiveness of his or her performance.

In addition, measures are obtained for two additional dimensions which have been found to be helpful in understanding jobs and employee reactions to them. These are:

Feedback from Agents. The degree to which the employee received clear information about his or her performance from supervisors or from co-workers.

Dealing with Others. The degree to which the job requires the employee to work closely with other people in carrying out the work activities (including dealings with other organization members and with external organizational "clients.")

2) Critical Psychological States. The JDS provides measures of each of the three psychological states which are shown in Figure 1 as mediating between the core job dimensions and the outcomes of the work. These are:

Experienced Meaningfulness of the Work. The degree to which the employee experiences the job as one which is generally meaningful, valuable and worthwhile.

Experienced Responsibility for Work Outcomes. The degree to which the employee feels personally accountable and responsible for the results of the work he or she does.

Knowledge of Results. The degree to which the

employee knows and understands, on a continuous basis, how effectively he or she is performing the job.

3) Affective Reactions to the Job. The JDS provides measures of a number of personal, affective feelings or reactions a person obtains from performing the job. These are viewed as the "personal outcomes" obtained from doing the work. The personal outcomes are:

General Satisfaction. An overall measure of the degree to which the employee is satisfied and happy with the job.

Internal Work Motivation. The degree to which the employee is self-motivated to perform effectively on the job, i.e. the employee experiences positive internal feelings when working effectively on the job, and negative internal feelings when doing poorly.

Specific Satisfactions. A number of short scales provide separate measures of satisfaction with: (a) job security, (b) pay and other compensation, (c) peers and co-workers ("social" satisfaction), (d) supervision, and (e) opportunity for personal growth and development on the job ("growth" satisfaction).

Items measuring general satisfaction and internal work motivation are intermixed with items tapping the three critical psychological states, in both the self-descriptive and projective sections of the instrument. For the five specific satisfactions, respondents report

directly how satisfied (or dissatisfied) they are with various aspects of their jobs.[1]

4) Individual Growth Need Strength. The JDS taps the strength of the respondent's desire to obtain "growth" satisfactions from his or her work. This measure is viewed as a malleable individual difference characteristic which (as shown in Figure 1) is predicted to affect how positively an employee will respond to a job with high motivating potential.

Growth need strength is measured in two separate sections of the instrument. In the "would like" section, respondents are asked to indicate the degree to which they would like several growth relevant conditions (e.g. opportunities to learn new things, opportunities to be creative and imaginative) present in their work. In the "job choice" section, respondents are asked to indicate their relative preferences for pairs of hypothetical jobs. In each item a job with characteristics relevant to growth need satisfaction is paired with a job which has the potential for satisfying one of a variety of other needs.[2]

---

1. Subsequent to the commencement of the present study Oldham Hackman and Stepina (1978) modified their model, making growth satisfaction a personal outcome and the other specific satisfactions (now context satisfactions) moderators rather than outcomes. However, in the present study, these specific satisfactions (security, pay, social, supervisory, growth) were seen purely as outcomes.

2. In Oldham, Hackman and Stepina's amended model the scores derived from both of these sections are averaged to form a total growth need strength index. This was not done in the present study.

Changes to the JDS

It was necessary to modify the JDS to some extent for the rural/farming context. It was adapted in two forms - Form B to suit the farm workers and students, and the considerably more modified Form A for the farmers. The questionnaire was examined and pilot tested with several farmers and farm workers before its form was finalised.

Only a few words had to be changed for Form B - e.g. instead of having separate categories of supervisor, manager and boss, it was decided to have only boss.

References to the organization or to clients were also inappropriate and were changed - e.g. in Section One, number one;

> "To what extent does your job require you to work closely with other people (either 'clients'. or people in related jobs in your own organization)?"

The bracketed phrase was changed to;

> "(other farm employees, stock and station agents, farm advisers and farmers)?"

In Section Four, number 12;

> "How secure things look for me in the future in this organization."

The word "organization" was replaced by "job". Item number 10 of the same section was changed from;

> "The degree to which I am fairly paid for what I contribute to this organization,"

to;

"The degree to which I am fairly paid for what I do."

More substantial modifications were necessary for Form A. The JDS works on the assumption that the worker has a boss, whereas the farmer seldom has (and if he has it puts him into a different category, that of farm manager. Almost by definition the farmer must be his own boss).

Those questions which referred to "managers or co-workers" were simply changed to refer to "fellow farmers". However, when the question referred solely to supervisors or managers it was changed to;

"fellow farmers, farm consultants, stock and station agents or your bank manager,"

or to;

"fellow farmers and your bank manager."

In only one case was it necessary to delete an item entirely because it was not applicable. This was item number 14 of Section Four;

"The overall quality of the supervision I receive in my work."

The questions pertaining to pay and fringe benefits also posed certain problems - overcome in some cases by substituting "income" for "pay." However, in other cases it was not as simple, e.g. in Section Four;

"The degree to which I am fairly paid for what I contribute." had to be changed to;

"The degree to which my income is appropriate to the work I do." The problem here is accentuated by the great variations from one year to the next in a

farmer's income. In view of this, items such as;

"The amount of pay and fringe benefits I receive."

were deemed best changed to;

"My usual level of income."

Pay and fringe benefits were usually changed to form two separate items.

A variety of other small changes were also made to put the questionnaire more into the farmers' idiom. For example, in Section One, question seven which concerns feedback from the job, relevant examples are added;

".... e.g. a good crop of wheat or high lambing percentage."

and in Section Three, question nine changes from;

"I frequently think of quitting this job."

to;

"I frequently think of selling up and going to town."

The form in which the research instruments were finally employed can be seen in Appendix B.

Research Procedure

With farmers and farm workers, the general procedure was to start from a base farm and radiate out in a systematic fashion, approaching as many subjects as possible within a given area. Initially farmers would be telephoned, given a quick outline of what the research

was about, and asked if they would cooperate. If so an appointment would be made to see them. When the research was begun in February and March, it was particularly important to make this appointment as many farmers were at a peak period of work - haymaking, harvesting and shearing. Unfortunately for the experimenter there was a particularly long, hot spell of weather at that time. This considerably added to the elusiveness of some farmers who would work extremely long and irregular hours. Wet weather was found to considerably facilitate the data collection process, as not only would the farmers be more likely to be at home, but, once given the questionnaire, they would have the time and inclination to complete it.

The appointments would be made for morning or afternoon tea times (smoko), lunch time, or in the evening, so generally the subjects would be seen in their homes. Occasionally it was necessary to seek subjects out somewhere on the farm, but this was avoided if possible as it increased the likelihood of a questionnaire being mislaid.

Generally, the questionnaire would be given to the subject and the experimenter would spend 10-15 minutes explaining its format and going through the demonstration questions. Also, the subject would be told about why the research was being done and what it entailed. This introductory session had no set format. The questionnaires were left for the subjects to complete in their own time and collected within the subsequent two weeks.

It was not always possible to see everyone personally and in these cases questionnaires were handed on to other farmers or employees by cooperative subjects. Although this was not as desirable as far as establishing rapport and assessing understanding was concerned, the response rate was still high.

In all cases, bar one, employers were quite happy for their employees to be approached with the questionnaire, and they often personally ensured its delivery and completion. The one refusal was prompted by the employer's belief that the questionnaire would promote dissatisfaction (in that it would make the employee think too analytically about his job), and that a study of this sort may lead to general unrest among Mid Canterbury farm workers.

So that it could be ascertained whether or not the questionnaires had been completed, subjects were telephoned prior to collection. This reminder service resulted in an exceptionally high response rate - 99% of those delivered and collected personally. Questionnaires delivered in the High Country were left with stamped addressed envelopes and posted back, because the amount of travelling involved made a second trip impractical. Apart from a few of those which were not delivered personally, all these questionnaires were returned. Whenever there was personal contact in delivering or collecting the questionnaires, or both, response was nearly 100%. Only one farmer refused to fill it in (on the grounds that he felt it was an

intrusion of his privacy). Response rates are given in Table 1.

TABLE 1. RESPONSE RATES

	Questionnaires Delivered/Collected Personally		Questionnaires Delivered/Collected By Proxy		
	Delivered	Returned	Delivered	Returned	% Response
High Country Farmers	18	17	12	8	83%
Low Country Farmers	48	48	3	2	98%
High Country Farm Workers	10	10	19	11	72%
Low Country Farm Workers	17	17	10	8	93%
Students	120	90	-	-	75%
TOTALS	213	182	44	29	82%

In order to obtain an agricultural student sample, access was granted to Diploma of Agriculture students in one of their lectures. In the lecture the purposes and form of the study were discussed and the questionnaires handed out and explained. Because these were all fulltime students, none currently employed, they were asked to relate the questions and their answers to

what they thought was their general attitude to their jobs as farm workers, and, most particularly, either to their last job or the job longest held. They all had had two years practical farm experience as a course prerequisite.

The students completed the questionnaires in their own time and they were collected two days later. Of 120 handed out, 90 were returned. Ten of these were discarded as they were filled out by female students and an all male sample was required.

CHAPTER FIVE

RESULTS

Major Analyses

Three major analyses of the data were carried out:

(1) Multivariate analyses of variance (including canonical discriminant analysis) with untransformed data (20 criteria, 0 covariates). These were used to discover overall effects and in particular, to test for occupation differences and the usefulness of the MPS measure.

(2) A multiple discriminant analysis which was used to see which combination of variables accounted for the occupation differences.

(3) Principal factor analyses. These were carried out to see if structure differences between high and low growth need subject groups could be detected.

MANOVA Analyses

Two MANOVAS were run:

(1) A three-way MANOVA (Occupation x Age x Education), with five occupation levels, three education levels and six age levels.

(2) A two-way MANOVA (Occupation x Growth Need Strength).

For these analyses, the data were partitioned into

two groups depending on higher order growth need as measured in the job choice format. Those scoring below the median were assigned to level one and those scoring above the median were assigned to level two. Summary tables for these two analyses follow (Tables 3 and 4). The complete results tables, including the non-significant results and the discriminating coefficients are given in Appendix A.

The factors and their corresponding level codes are given in Table 2.

Table 2

FACTORS AND THEIR CORRESPONDING LEVEL CODES

Occupation	Age
1) Low country farmers	1) under 20 years
2) High country farmers	2) 20-29 years
3) Low country farm workers	3) 29-39 years
4) High country farm workers	4) 40-49 years
5) Agricultural students	5) 50-59 years
	6) over 60 years
Education	**Growth Need**
1) Primary school	1) Below median on the job choice variable
2) Secondary school	2) Above the median
3) Tertiary level	

Overall effects for the MANOVA analysis were assessed by Wilk's Lambda and expressed as Canonical Correlations.

Results of Analysis 1 (The three-way MANOVA)

These results are shown in Table 3. The occupation main effect was seen in 13 of the 20 JDS variables. It was particularly strong with respect to autonomy, experienced responsibility and MPS.

The notable thing about the age main effect is the discriminating effect of the task significance variable, which does not show up in either the occupation or occupation x age effects. This is mentioned in passing, but the effect of age on task significance could be studied further, particularly in separating out the two effects of age and years spent in the present job. The age effect on significance is graphed in Figure 2.

The occupation x age interaction appears for six variables and is difficult to interpret. Figure 3 is a graph of the interaction for MPS, but there are no interpretable trends apart from the anomalous increase in motivating potential for farm workers in their forties, and the general decline in motivating potential for low country farmers as against the increase for low country farm workers. The results for age level six should be treated with caution, as there were few respondents over the age of 60 in the study.

Results of Analysis 2 (The two-way MANOVA)

These results are shown in Table 4. This analysis showed a growth need strength main effect, but no interaction between growth need strength and occupation.

By partitioning growth need strength into high and

Table 3

RESULTS OF THE 3-WAY MULTIVARIATE ANALYSIS OF VARIANCE (OCCUPATION X AGE X EDUCATION) WITH CANONICAL CORRELATIONS (Rc)

Effect	F-ratio	P	Rc
General Effects			
Source OA	1.287	.001	.774
O	2.973	.001	.755
A	1.306	.032	.481
Single Variable Effects			
Within OA (Occupation-Age interaction)			
2. Task Identity	1.954	.012	
4. Autonomy	3.755	.001	
6. Feedback Agents	2.126	.005	
7. Dealings with Others	1.904	.015	
9. Experienced Responsibility	4.649	.001	
20. MPS	3.283	.001	
Within O (Occupation)			
1. Skill Variety	3.722	.006	
2. Task Identity	6.010	.001	
4. Autonomy	28.109	.001	
5. Feedback Job	5.347	.001	
9. Experienced Responsibility	26.601	.001	
10. Knowledge of Results	3.090	.017	
11. General Satisfaction	3.001	.020	
13. Pay Satisfaction	4.167	.003	
14. Security Satisfaction	3.460	.009	
15. Social Satisfaction	2.814	.027	
16. Supervisory Satisfaction	3.331	.012	
17. Growth Satisfaction	7.102	.001	
20. MPS	19.805	.001	
Within A (Age)			
3. Task Significance	4.191	.001	
6. Feedback Agents	2.490	.033	
7. Dealings with Others	2.502	.033	

Note: Contrasts not shown were non-significant.

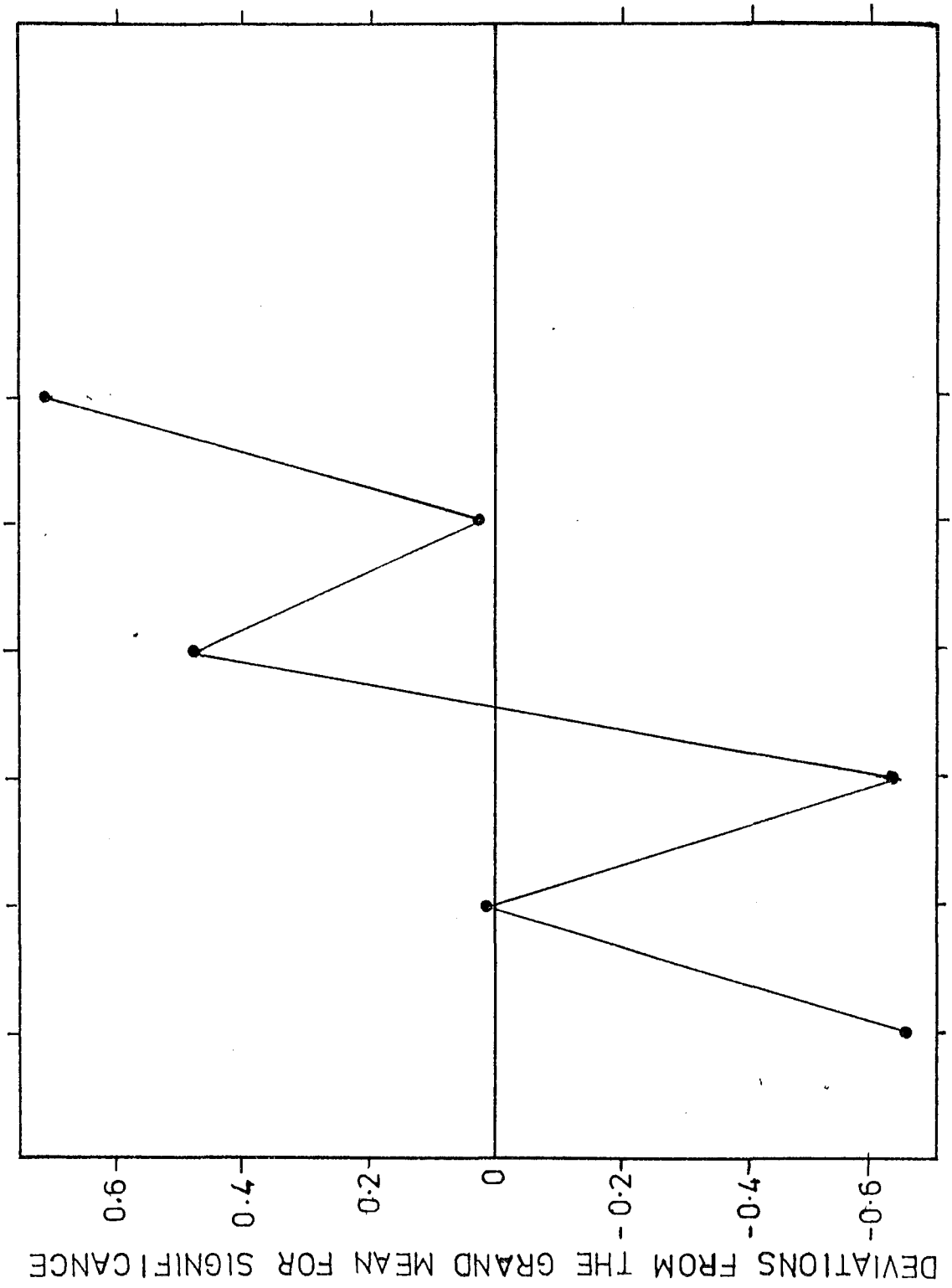


FIG 2. Change in Significance over Age. $p < 0.001$

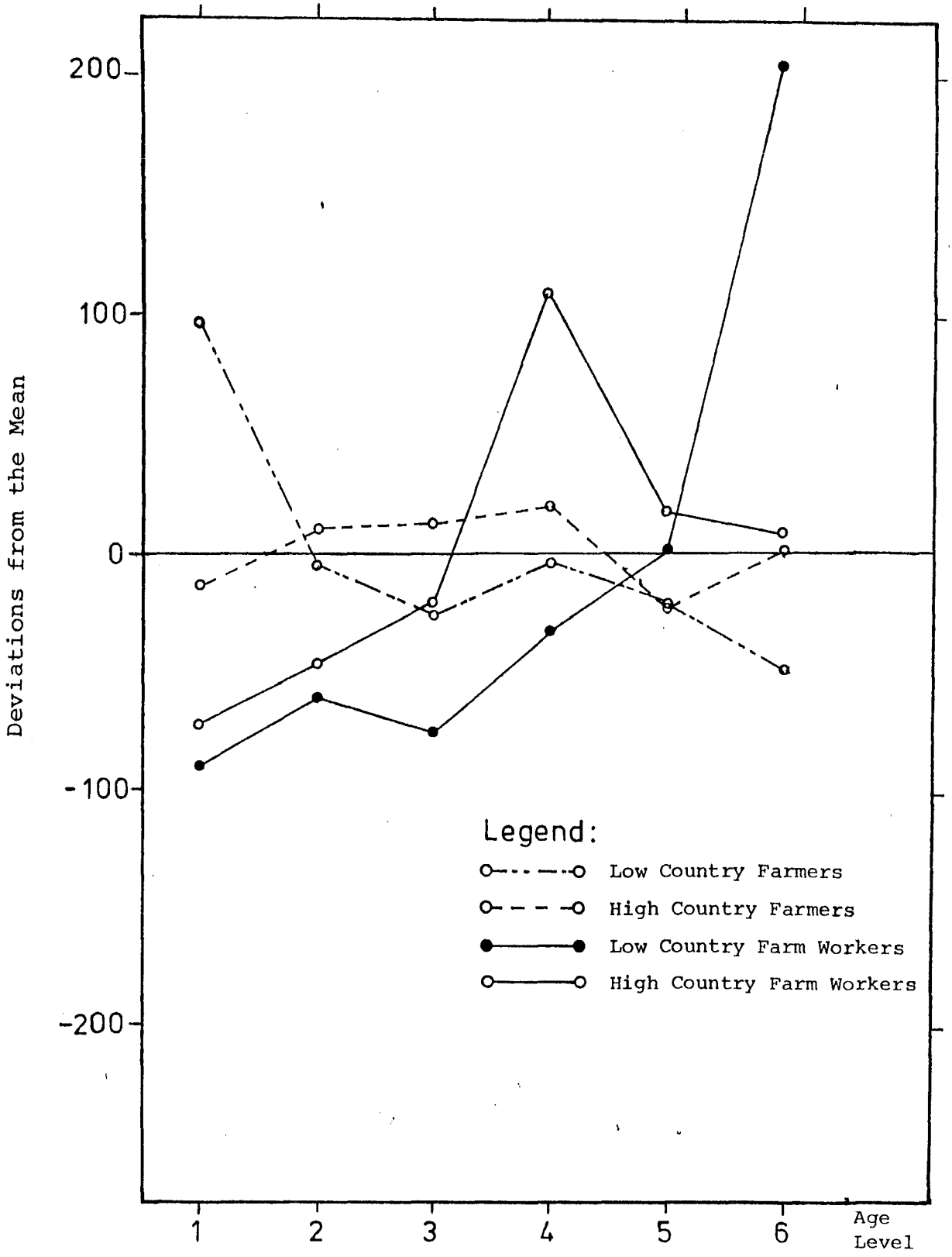


FIG. 3. Occupation x Age Interaction on the MPS Score.

Table 4

RESULTS OF THE SECOND MULTIVARIATE ANALYSIS OF VARIANCE

2-Way Manova (Occupation (O) x Growth Need Strength (G))
with Canonical Correlation (Rc)

Effect	F-ratio	P	Rc
	F(18,170)		
J	1.875	.021	.407
Single Variable Effects			
Within J (Growth Need Strength)			
	F(1,187)		
1. Skill Variety	9.322	.003	
4. Autonomy	15.085	.001	
9. Experienced Responsibility	17.839	.001	
11. General Satisfaction	5.323	.022	
12. Internal Motivation	5.516	.020	
20. MPS	8.558	.004	

Note: Non significant effects are not shown, and the Occupation Main Effect is reported in Table 1.

low scores (with reference to the median) and then testing for one-way MANOVA effects, a conservative test for variables which may be subject to the moderating effect of growth need strength has been constructed. The reasoning is that, if a variable is indifferent to whether growth need strength is high or low, then its relationship to other variables is unlikely to be moderated by growth need strength. If the analysis is correct, then the feedback components, along with knowledge of results and meaningfulness, should be removed from Hackman and Lawler's model.

Discriminating Between Farming Occupations with the JDS

Table 5 gives the means for each of the five occupational groups (high country farmers, low country farmers, high country farm workers, low country farm workers, students) over the 20 variables (core job dimensions, critical psychological states, outcomes, moderators and the MPS). For eight of the variables - task significance, feed back from agents, dealings with others, experienced meaningfulness, internal work motivation, and the two growth need strength measures, there were no significant differences among the groups.

For three of the core dimensions (skill variety, task identity and autonomy) farmers, as a whole, scored significantly higher than the other groups. Farmers' scores were also significantly higher for experienced responsibility, knowledge of results, general satisfaction and growth satisfaction.

On the pay satisfaction measure, farmers, and most

Table 5

MEANS FOR EACH OF THE FIVE OCCUPATIONAL GROUPS OVER THE 20 VARIABLES

Variables	High Country Farmers		Low Country Farmers		High Country Farm Workers		Low Country Farm Workers		Students	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
1 Skill Variety	6.0	0.57	5.9	0.78	5.4	0.92	5.5	0.77	5.3	0.1
2 Task Identity	6.0	0.94	6.1	0.83	5.6	0.94	5.3	0.89	5.4	1.01
3 Task Significance	5.2	1.26	5.2	1.26	5.1	1.43	4.8	1.15	4.8	1.2
4 Autonomy	6.7	0.6	6.5	0.71	5.4	1.18	4.9	1.24	5.0	1.09
5 Feedback Job	6.1	0.92	5.7	1.04	5.7	1.04	5.3	1.13	5.1	1.1
6 Feedback Agents	4.0	1.43	4.5	1.32	4.8	1.55	4.5	1.45	4.7	1.27
7 Dealings with Others	4.9	1.34	4.7	1.14	4.6	1.45	4.7	1.32	4.7	1.27
8 Experienced Meaningfulness	6.3	0.58	6.2	0.45	6.0	0.7	5.9	0.62	6.0	3.44
9 Experienced Responsibility	6.4	0.38	6.3	0.43	5.7	0.71	5.3	0.71	5.3	0.7
10 Knowledge of Results	5.7	0.5	5.6	0.64	5.3	0.75	5.5	0.75	5.1	0.86
11 General Satisfaction	5.8	0.66	5.8	0.6	5.2	0.89	5.3	0.89	5.2	0.95
12 Internal Work Motivation	5.8	0.74	5.8	0.53	5.6	0.55	5.6	0.55	5.6	0.68
13 Pay Satisfaction	3.4	1.79	4.0	1.54	4.9	1.42	4.9	1.42	4.2	1.61
14 Security Satisfaction	5.2	1.69	5.7	0.91	5.9	0.71	5.8	0.71	4.9	1.37
15 Social Satisfaction	5.5	0.8	5.3	0.79	5.1	0.86	5.4	0.86	4.8	1.06
16 Supervisory Satisfaction	5.7	0.67	5.9	0.55	5.7	1.03	5.7	1.03	5.4	1.01
17 Growth Satisfaction	6.0	0.95	6.1	0.54	5.6	0.73	5.4	1.08	5.3	1.0
18 "Would Like" GNS	5.6	1.0	5.5	1.14	5.5	1.15	5.4	1.18	5.7	0.86
19 "Job Choice" GNS	3.5	0.32	3.5	0.46	3.3	0.88	3.4	0.33	3.4	0.42
20 MPS	236.2	55.812	215.2	59.669	171.6	73.311	139.9	57.447	139.4	61.609

especially high country farmers, were significantly less satisfied than the other groups.

Students and low country farm workers found significantly less feedback from their jobs than did the farmers and high country farm workers.

There were also significant differences in security satisfaction, students being least satisfied and high country farmers also being significantly less satisfied than the farm worker groups and the low country farmers.

The most significant difference was evident in the MPS. On this variable high country farmers scored most highly (232.6), followed by low country farmers (215.3), high country farm workers (171.6), low country farm workers (139.9) and students (139.4).

Table 6 and Figure 4 illustrate the relationship of the five groups to each other over the seven job dimensions.

Figure 5 includes those variables for which there were significant differences between groups. The MPS scores have been transformed by multiplying by 3/100.

Table 6

SUMMARY OF CHARACTERISTICS OF JOBS STUDIED
FOR THE FIVE OCCUPATIONAL GROUPS

	N	$\bar{X}$ ratings of job characteristics for each group						
		Skill Variety	Task Identity	Task Signif-icance	Autonomy	Feedback Job	Feedback Agents	Dealing with Others
High Country Farmers	25	6.	6.	5.2	6.7	6.1	4.	4.9
Low Country Farmers	50	5.9	6.1	5.2	6.5	5.7	4.5	4.7
High Country Farm Workers		5.4	5.6	5.1	5.4	5.7	4.8	4.6
Low Country Farm Workers		5.5	5.3	4.8	4.9	5.3	4.5	4.7
Students	46	5.3	5.4	4.8	5.0	5.1	4.7	4.7

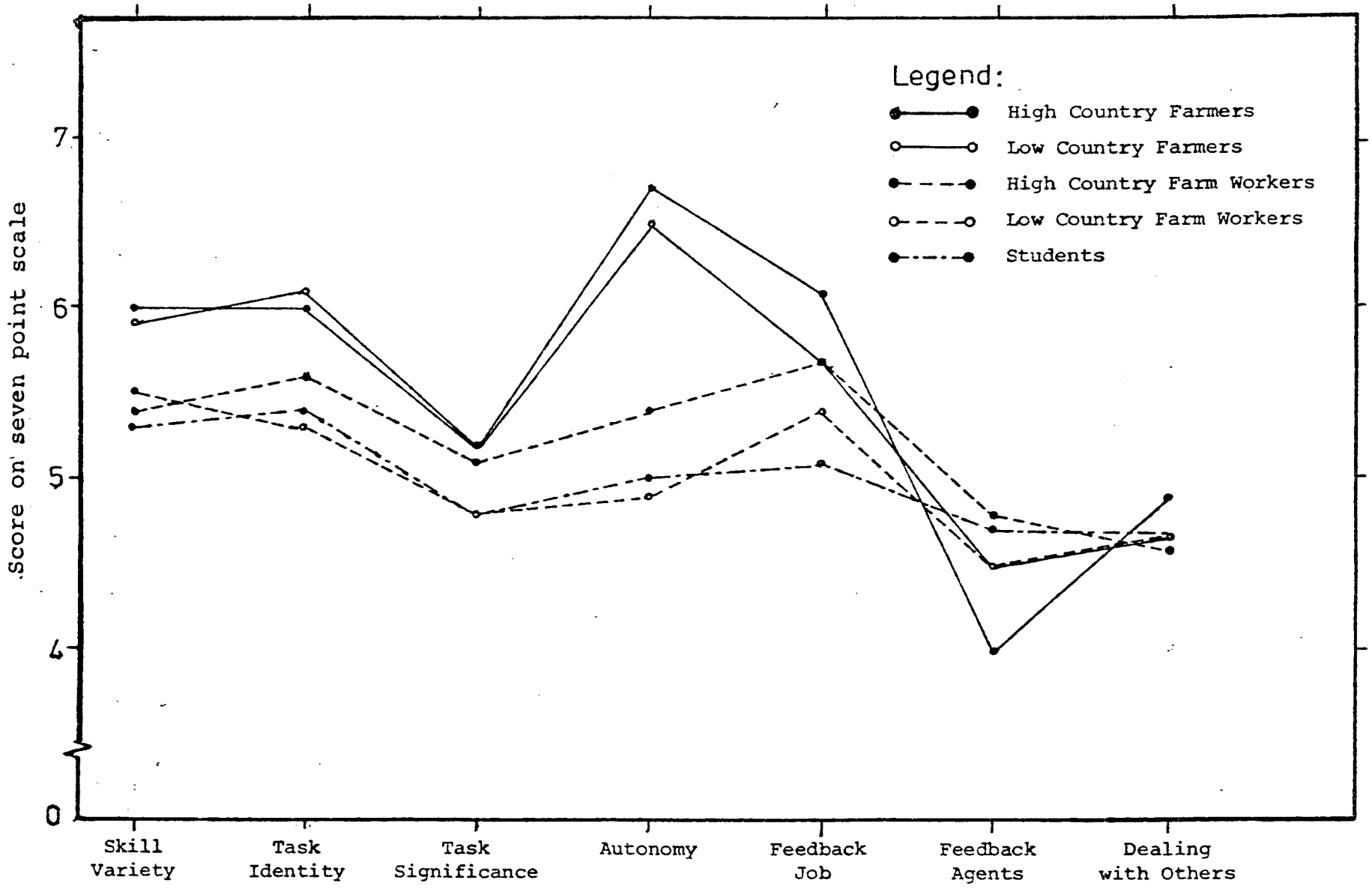


FIG 4 Means for the five occupational groups on the job dimensions.

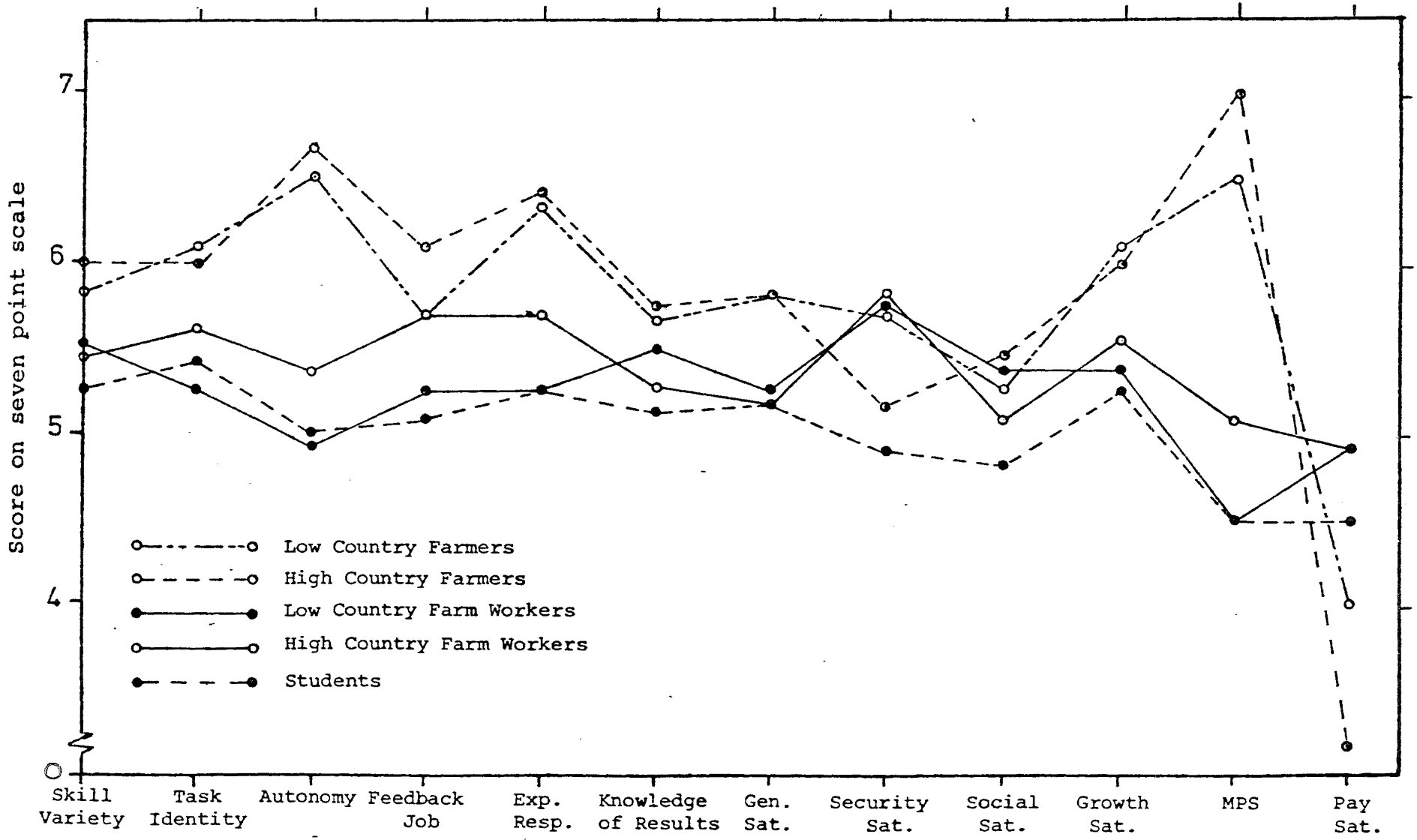


FIG. 5 Variables depicting significant differences between groups.

Table 7 INTERCORRELATIONS AMONG DEPENDENT VARIABLES

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 Skill Variety	-																			
2 Task Identity	0.198*	-																		
3 Task Significance	0.315**	0.147	-																	
4 Autonomy	0.361**	0.460**	0.182	-																
5 Feedback Job	0.265**	0.218*	0.263**	0.386**	-															
6 Feedback Agents	0.167	0.207*	0.228*	0.255**	0.355**	-														
7 Dealings with Others	0.388**	-0.118	0.369**	0.025	0.106	0.233*	-													
8 Experienced Meaningfulness	-0.033	0.095	0.028	0.070	-0.009	0.113	0.029	-												
9 Experienced Responsibility	0.377**	0.281**	0.257**	0.458**	0.204*	0.160	0.164	0.094	-											
10 Knowledge of Results	0.158	-0.034	-0.042	0.074	0.121	-0.086	0.020	-0.027	0.060	-										
11 General Satisfaction	0.136	-0.047	-0.033	0.061	0.027	-0.119	0.062	0.001	0.054	0.958**	-									
12 Internal Motivation	0.136	-0.075	-0.021	0.018	0.048	-0.153	0.034	-0.021	0.032	0.948**	0.967**	-								
13 Pay Satisfaction	0.120	0.015	-0.009	0.069	0.060	-0.046	0.032	0.023	0.060	0.838**	0.854**	0.820**	-							
14 Security Satisfaction	0.111	-0.009	-0.019	0.037	0.011	-0.121	0.034	-0.031	-0.008	0.927**	0.943**	0.930**	0.893**	-						
15 Social Satisfaction	0.143	-0.044	0.031	0.046	0.022	-0.098	0.126	-0.048	0.025	0.929**	0.962**	0.947**	0.844**	0.935**	-					
16 Supervisory Satisfaction	0.199*	0.228*	0.330**	0.352**	0.248*	0.358**	0.179	0.077	0.305**	-0.148	-0.145	-0.193	-0.028	-0.150	-0.098	-				
17 Growth Satisfaction	0.321**	0.265**	0.258**	0.522**	0.363**	0.234*	0.139	0.106	0.458**	0.112	0.096	0.028	0.146	0.054	0.118	0.636**	-			
18 Would Like GNS	0.207*	-0.017	0.031	0.104	0.110	0.157	0.111	-0.064	0.200*	0.065	0.047	0.061	-0.013	0.036	0.028	0.048	0.072	-		
19 Job Choice GNS	0.246*	0.054	-0.012	0.252**	0.060	0.087	-0.028	-0.001	0.230*	0.035	0.074	0.053	0.026	0.037	0.022	-0.026	0.070	0.223*	-	
20 MPS	0.495**	0.504**	0.479**	0.755**	0.790**	0.375**	0.164	0.049	0.434**	0.080	0.030	0.025	0.069	0.018	0.037	0.348**	0.521**	0.145	0.161	-

P < .01 = .250**

P < .05 = .195*

Table 7 lists the intercorrelations among the 20 variables used in this study. Many of these are significant, some of them extremely so. A subset of five of the variables which have particularly high correlations (knowledge, general satisfaction, internal motivation, security and social satisfaction) is shown in Table 8.

Table 8
INTERCORRELATIONS FOR FIVE OF THE VARIABLES

Variable	1	2	3	4	5
1. Knowledge of Results	.				
2. General Satisfaction	.96	.			
3. Internal Motivation	.95	.97	.		
4. Security Satisfaction	.93	.94	.93	.	
5. Social Satisfaction	.93	.96	.95	.93	.

Each of these shows an almost perfect correlation with each of the others, correlations varying from .93 to .97. These variables also correlated very highly with pay satisfaction - all of the correlations being over .83.

The discriminant scores contrast for the five occupations are represented as deviations from the Grand Mean. This is given in Table 9. It shows how the discriminant function differentiated between the occupations. Figure 6 shows the relative position of these scores on the Discriminating Continuum.

It can be seen that there is little difference between students and low country farm workers, both of these groups being at the lower end of the continuum. There is a

Table 9

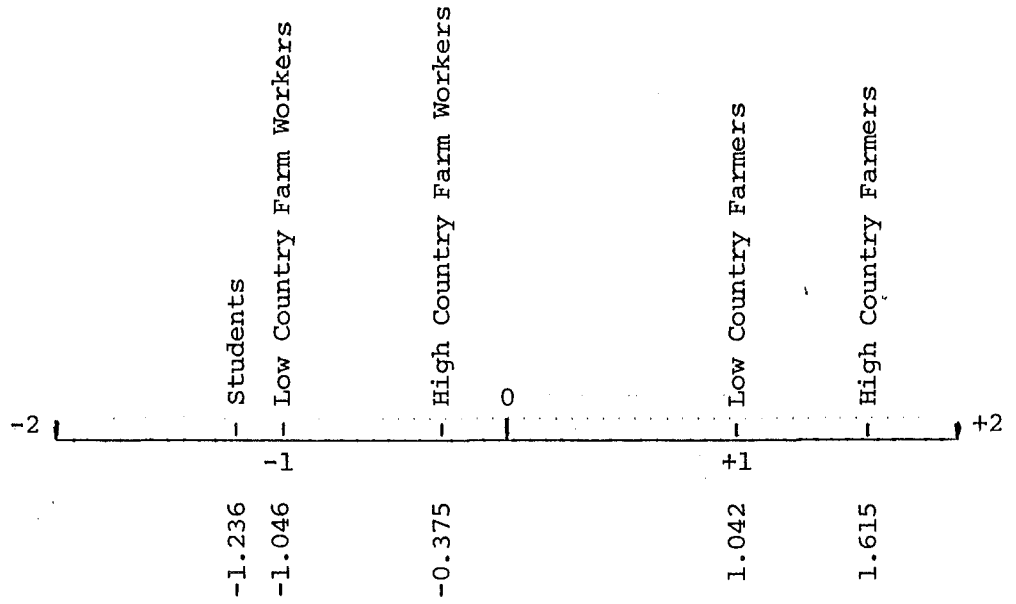
DISCRIMINANT SCORES CONTRAST FOR THE FIVE OCCUPATIONS REPRESENTED AS DEVIATIONS FROM THE GRAND MEAN

Occupation	Discriminant Contrast
Low Country Farmers	1.042
High Country Farmers	1.615
Low Country Farm Workers	-1.046
High Country Farm Workers	-0.375
Students	-1.236

(Occupation main effect - 20 variables).

Figure 6

RELATIVE POSITION OF THE FIVE OCCUPATIONAL GROUPS ON THE DISCRIMINATING CONTINUUM



significant difference between the low and high country farm workers (discriminant contrast scores being -1.046 and -0.375 respectively), between the high country farm workers and the low country farm workers (1.042), and between the two farmer groups (high country farmers' score being 1.615).

Thus, this continuum clearly displays the bipolar distribution of the five groups - farmers, be they high or low country, at one end, and their employees (high and low country farm workers and students) at the other.

Table 10 shows the correlations between variables and composite scores. It indicates that the discriminating function is effectively a composite of three variables:

1) How much autonomy there is in the job.
2) Experienced responsibility for work outcomes.
3) The motivation potential of the job.

Multiple Discriminant Analysis

These results are shown in Table 11. 98% of the low country and 80% of the high country farmers were predicted correctly as falling into these groups. These high percentages show them (and most especially the low country farmers) to be particularly distinctive and homogeneous groups.

For both groups of farm workers the percentage correctly predicted was about the same - for low country 64% and for high country 66.67%. Although considerably lower than correct predictions for the farmer groups, they are still high enough to show each group of farmers to be a distinctive class.

Table 10

CORRELATIONS BETWEEN VARIABLES AND COMPOSITE SCORES

Variable	Correlation	
Skill Variety	0.231	
Task Identity	0.298	
Task Significance	0.118	
Autonomy	0.658	1
Feedback Job	0.274	
Feedback Agents	-0.113	
Dealings with Others	0.023	
Experienced Meaningfulness	0.054	
Experienced Responsibility	0.641	2
Knowledge of Results	0.077	
General Satisfaction	0.051	
Internal Motivation	0.019	
Pay Satisfaction	-0.099	
Security Satisfaction	0.033	
Social Satisfaction	0.047	
Supervisory Satisfaction	0.192	
Growth Satisfaction	0.324	
Would Like GNS	-0.038	
Job Choice GNS	0.132	
MPS	0.555	3

1, 2, 3 - The three high correlations have been marked thus.

Table 11

RESULTS OF THE MULTIPLE DISCRIMINANT ANALYSIS

ACTUAL	PREDICTED					
	1	2	3	4	5	ΣN
1 Low Country Farmers	49		1			50
2 High Country Farmers	1	20	4			25
3 Low Country Farm Workers			16	5	4	25
4 High Country Farm Workers			3	14	4	21
5 Students		3	24	7	46	80
ΣN	50	23	48	26	54	201

1 Low Country Farmers - 98% correct

2 High Country Farmers - 80% correct

3 Low Country Farm Workers - 64% correct

4 High Country Farm Workers - 66.67% correct

5 Students - 57.5% correct

Overall - 72% correct classification.

Without Students - 82% correct classification.

The percentage of correct predictions for the students was much the lowest - 57.5% correct. Thus, students appear to be a more heterogeneous group than the others, not being such a distinct class of their own.

Overall 72% of the subjects had their categories predicted correctly. With students removed from the sample this rose to 82%.

Partial Correlations Analysis

This analysis was carried out in order to try to determine to what extent Growth Need Strength acts as a moderating variable. The results are shown in Table 12. This was done to find out what part of the correlation between selected variables remained when the effect of growth need strength was removed. No significant differences were found, with the largest difference being .033 in the case of the correlation between experienced responsibility and autonomy. Thus it appears that 0.5% of the variance overlap between experienced responsibility and autonomy is due to their common relationship with growth need strength. The proportion is even less for the other variable pairs. It is obvious that the partial correlation analysis shows no indication of a growth need strength moderating effect. The formula used for calculating the partical correlation was:

$$r_{12.3} = \frac{r_{12} - r_{13}\, r_{23}}{\sqrt{(1-r_{13}^2)(1-r_{23}^2)}}$$

as given in Ferguson (1971, P. 391).

Table 12

RESULTS OF THE PARTIAL CORRELATIONS ANALYSIS

	Skill Variety	Task Identity	Task Significance	General Satisfaction
Experienced Meaningfulness	-0.034 (-0.033)	0.092 (0.095)	0.028 (0.028)	0.001 (1) (0.001) (2)
	Autonomy	General Satisfaction		
Experienced Responsibility	0.425 (0.458)	0.038 (0.054)		
	Feedback Job	Feedback Agents	General Satisfaction	
Knowledge of Results	0.119 (0.121)	-0.089 (-0.086)	0.959 (0.958)	

(1) Partial Correlations

(2) Ordinary Correlations

Principal Factor Analyses

These were also carried out on the data. On the basis of their growth need score the subjects were placed into two groups. Those scoring below the median growth need score were classified as the "low" growth need group, while those scoring above the median were classified as the "high" growth need group. The data for these two groups were then factor analysed separately, using principal factor analysis. The solutions were left unrotated so as to minimise differences arising solely from chance rotational criteria. This was so that it could be seen if differences in strength of growth need might be accompanied by a change in the factor structure of the JDS items. In passing, it may be speculated how useful the growth need strength item can be in verifying the moderating effect proposed in Hackman and Lawler's model, when it appears to show so little variation - at least across the present sample (across the whole sample, S.D. = 0.884).

Correlations from these analyses are shown in Table 13. Table 14 gives a subset of those correlations which, according to the JDS model, should show the moderating effects of GNS.

It can be seen that, in every case, there are some differences between the pairs of correlations, though few are significant. If GNS does have a moderating effect, those with high GNS scores should have significantly higher correlations than those with low GNS scores, between experienced meaningfulness and skill variety, experienced meaningfulness and task identity, experienced meaningfulness and task significance, experienced meaningfulness and

Table 13 INTERCORRELATIONS AMONG DEPENDENT VARIABLES FOR "HIGH" AND "LOW" GROWTH NEED GROUPS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 Skill Variety	-																			
2 Task Identity	0.1229* (0.386)	-																		
3 Task Significance	0.267 (0.383)	0.177 (0.17)	-																	
4 Autonomy	0.425 (0.393)	0.499 (0.586)	0.212 (0.212)	-																
5 Feedback Job	0.157* (0.437)	0.12* (0.435)	0.127* (0.437)	0.333* (0.562)	-															
6 Feedback Agents	0.028 (0.238)	0.051 (0.249)	0.157 (0.255)	0.09 (0.152)	0.343 (0.242)	-														
7 Dealing with Others	0.316 (0.368)	-0.164 (-0.039)	0.395 (0.338)	0.068 (0.007)	0.113 (0.101)	0.248 (0.199)	-													
8 Experienced Meaningfulness	0.476** (-0.108)	0.262 (0.097)	0.268 (-0.009)	0.491** (0.044)	0.304* (-0.05)	0.086 (0.133)	0.204 (-0.004)	-												
9 Experienced Responsibility	0.419 (0.394)	0.274* (0.528)	0.283 (0.264)	0.562 (0.693)	0.227 (0.402)	0.034 (0.06)	0.178 (0.120)	0.622** (0.04)	-											
10 Knowledge of Results	0.299 (0.344)	0.226 (0.325)	-0.014 (0.234)	0.339 (0.501)	0.558 (0.514)	0.318* (0.049)	-0.021 (0.008)	0.495** (-0.021)	0.406 (0.442)	-										
11 General Satisfaction	0.238 (0.354)	0.325 (0.305)	0.248 (0.131)	0.483 (0.474)	0.318 (0.311)	0.172 (0.183)	0.199 (0.155)	0.598** (0.181)	0.543 (0.472)	0.382 (0.528	-									
12 Internal Motivation	0.208 (0.303)	0.077 (0.202)	0.177 (0.261)	0.26 (0.224)	0.387 (0.348)	0.035 (0.028)	0.156 (-0.017)	0.433** (0.078)	0.43 (0.29)	0.214 (0.265)	0.347 (0.177)	-								
13 Pay Satisfaction	-0.045 (0.14)	0.16 (0.054)	0.025 (0.113)	-0.085 (0.115)	0.075 (0.121)	0.275 (0.123)	-0.002 (0.014)	-0.027 (0.142)	-0.128 (0.196)	0.09 (0.26)	0.156 (0.312)	-0.201 (0.049)	-							
14 Security Satisfaction	0.145 (0.135)	0.321 (0.281)	0.162 (0.161)	0.221 (0.246)	0.024 (0.281)	0.186 (0.046)	0.023 (0.029)	0.148 (0.02)	0.079 (0.23)	0.152 (0.355)	0.231 (0.250)	-0.071 (0.012)	0.6 (0.481)	-						
15 Social Satisfaction	0.256 (0.282)	0.254 (0.194)	0.367 (0.319)	0.371 (0.254)	0.164 (0.263)	0.224 (0.144)	0.276 (0.411)	0.353* (-0.09)	0.257 (0.309)	0.192 (0.292)	0.447 (0.456)	0.253 (0.124)	0.208 (0.247)	0.281 (0.338)	-					
16 Supervisory Satisfaction	0.192 (0.336)	0.211 (0.318)	0.315 (0.374)	0.378 (0.444)	0.245 (0.359)	0.335 (0.25)	0.199 (0.042)	0.397** (0.016)	0.281 (0.472)	0.304 (0.452)	0.553 (0.529)	0.255 (0.310)	0.245 (0.393)	0.281 (0.424)	0.579 (0.508)	-				
17 Growth Satisfaction	0.355 (0.382)	0.338 (0.356)	0.287 (0.272)	0.579 (0.621)	0.418 (0.432)	0.214 (0.121)	0.193 (0.062)	0.594** (0.034)	0.506 (0.594)	0.479 (0.585)	0.638 (0.661)	0.325 (0.311)	0.208 (0.277)	0.302 (0.325)	0.611 (0.476)	0.7 (0.641)	-			
18 Would Like GNS	0.111 (0.196)	-0.064 (-0.013)	-0.091 (0.113)	-0.065 (0.094)	0.133 (0.023)	0.103 (0.230)	0.174 (0.049)	0.134 (-0.109)	0.162 (0.045)	0.221 (-0.091)	0.019 (0)	0.183 (0.04)	-0.102 (-0.056)	-0.041 (-0.02)	0 (-0.091)	-0.021 (0.086)	-0.002 (0.067)	-		
19 Job Choice GNS	0.152 (0.248)	0.077 (0.111)	-0.008 (-0.18)	0.149 (0.278)	0.04 (0.037)	0.06 (0.08)	-0.012 (-0.078)	0.164 (0.058)	0.142 (0.164)	-0.014 (-0.031)	0.19 (0.102)	0.089 (-0.089)	0.009 (-0.079)	0.08 (-0.111)	-0.049 (-0.112)	-0.033 (0.059)	0.019 (0.121)	0.157 (0.122)	-	
20 MPS	0.457 (0.579)	0.48 (0.653)	0.424 (0.504)	0.789 (0.850)	0.742 (0.838)	0.239 (0.246)	0.167 (0.145)	0.508** (0.009)	0.510 (0.669)	0.484 (0.518)	0.48 (0.428)	0.418 (0.331)	0.003 (0.139)	0.197 (0.287)	0.375 (0.327)	0.386 (0.481)	0.601 (0.591)	0.03 (0.112)	0.108 (0.169)	-

** P < .01 Top Line - "High" Growth Need

* P < .05 Brackets - "Low" Growth Need

Table 14

SUBSET OF CORRELATIONS WHICH ARE PREDICTED TO SHOW THE MODERATING EFFECTS OF GNS (by the JDS Model)

	Skill Variety	Task Identity	Task Signif-icance	General Satis-faction	Internal Motivation
Experienced Meaningfulness	0.476**	0.262	0.268	0.598**	0.433**
	(-0.108)	(0.097)	(-0.009)	(0.181)	(0.078)

	Autonomy	General Satis-faction	Internal Motivation
Experienced Responsibility	0.562	0.543	0.43
	(0.693	(0.472)	(0.29)

	Feedback Job	Feedback Agents	General Satis-faction	Internal Motivation
Knowledge of Results	0.558	0.318*	0.382	0.214
	(0.514)	(0.049)	(0.528)	(0.265)

	Skill Variety	Task Identity	Task Signif-icance	Autonomy	Feedback Job	Feedback Agents
General Satisfaction	0.238	0.325	0.248	0.483	0.318	0.172
	(0.354)	(0.305)	(0.131)	(0.474)	(0.311)	(0.183)

* $p < .05$

** $p < .01$

Top line - "High" Growth Need

Brackets - "Low" Growth Need

internal work motivation, and between experienced meaningfulness and general satisfaction. They should also have higher correlations between experienced responsibility and autonomy, experienced responsibility and internal work motivation, experienced responsibility and general satisfaction, knowledge of results and feedback (from both the job, and other people), knowledge of results and internal work motivation, and between knowledge of results and general satisfaction.

Tests of the significance of the difference between two correlation coefficients for independent samples (Ferguson, 1971, p. 170) were applied. It was found that the results lend relatively little support to the model. There were significant differences (.01 level) in the experienced meaningfulness/skill variety correlations (0.476 for high GNS, -0.108 for low GNS), between the experienced meaningfulness/internal work motivation correlations (0.433 for high GNS, 0.078 for low GNS), between the experienced meaningfulness/general satisfaction correlations (0.598 for high GNS, 0.181 for low GNS), and at the .05 level for the knowledge of results/feedback from agents correlations (0.318 for high GNS, 0.049 for low GNS). There were also non-significant differences in the predicted direction for experienced meaningfulness/task identity (0.262 for high GNS, 0.097 for low GNS), between the experienced meaningfulness/task significance correlations (0.268 for high GNS, -0.009 for low GNS) and between the experienced responsibility/internal work motivation correlations (0.433 for high GNS, 0.29 for low GNS).

A weaker trend in the predicted direction was shown between experienced responsibility and general satisfaction (0.543 for high GNS, 0.472 for low GNS), and between knowledge of results and job feedback (0.558 for high GNS, 0.514 for low GNS). However, for three of the relationships, the difference between the correlations was in an opposite direction to that predicted, though not to a significant extent, (experienced responsibility/autonomy, high GNS 0.562, low GNS 0.693, knowledge of results/internal work motivation, high GNS 0.214, low GNS 0.265, knowledge of results/general satisfaction, high GNS 0.382, low GNS 0.528).

There were no significant differences between high and low GNS subjects for the correlations between the core dimensions and outcomes. There seemed to be a trend in the predicted direction between general satisfaction and task significance, but between general satisfaction and skill variety the effect was opposite to that predicted.

GNS seemed to have a far stronger moderating effect for relationships where it was not specifically predicted to do so. The highest and most consistent differences in correlations were for the experienced meaningfulness factor. Its correlations with job feedback, autonomy, social satisfaction, supervisory satisfaction, growth satisfaction, experienced responsibility, knowledge of results and MPS were all significantly higher for high GNS subjects, while correlations between skill variety and task identity, between experienced responsibility and task identity, and between job feedback and skill variety, task identity, task significance and autonomy were significantly higher for low GNS subjects.

Tables 15 and 16 present the items' means, standard deviations and factor loadings for the factors, with the five highest eigenvalues following a principal factor analysis of the JDS items for the high and low growth need groups, respectively.

The first point to notice is that the proportions of variance accounted for by the respective factors in the two analyses are very similar. Further evidence for the fundamental similarity of the two obtained structures is gained from a comparison of the respective weights on the first two factors. Table 17 shows that the first factors are essentially the same for the high and low growth need groups, except for the element of experienced meaningfulness which has the third highest loading for the high group, while being absent in the low group factor 1.

Table 18 shows a comparison of items whose loadings on factor 2 exceed 0.3 in either or both of the two growth need groups. This factor has high weights on pay satisfaction, security satisfaction and social satisfaction, as well as negative weights on job choice, would like GNS, autonomy, and MPS. Once again, the differences between the groups are small.

Before concluding the report of the factor analytic results, the communalities for items across groups will be briefly compared, remembering that communalities may be described as the extent to which that item is explained by the given factor structure. The only major difference concerns internal motivation which is better explained by the low group (as against the high group) factor structure.

Table 15

JDS ITEM, MEAN, S.D., PRINCIPAL FACTOR LOADING, AND COMMUNALITY FOR THE HIGHER GROWTH NEED RESPONDENTS

Item	Mean	S.D.	Factor Loading [a.]					h^2 [b.]
			I	II	III	IV	V	
1 Skill Variety	5.79	.85	540	-258	129	-181	-274	525
2 Task Identity	5.76	.98	461	201	-535	-232	010	623
3 Task Significance	5.13	1.27	443	098	421	-365	113	703
4 Autonomy	5.86	1.13	738	-119	325	-238	080	759
5 Feedback Jobs	5.57	1.11	562	-144	-085	567	327	838
6 Feedback Agents	4.61	1.48	324	334	258	552	033	651
7 Dealings with Others	4.74	1.33	309	-023	781	-038	-111	752
8 Experienced Meaningfulness	5.96	.74	748	-236	-019	-073	-170	701
9 Experienced Responsibility	5.91	.73	687	-358	-068	-172	-158	674
10 Knowledge of Results	5.48	.82	594	-091	-239	519	062	715
11 General Satisfaction	5.63	.79	744	-059	-032	-072	-099	659
12 Internal Motivation	5.78	.51	500	-442	140	047	070	492
13 Pay Satisfaction	4.16	1.74	141	797	-066	201	-229	752
14 Security Satisfaction	5.39	1.25	338	655	-170	-037	-352	707
15 Social Satisfaction	5.23	.91	616	314	267	-189	094	633
16 Supervisory Satisfaction	5.65	.95	667	344	256	-021	125	730
17 Growth Satisfaction	5.71	1.02	835	166	-004	-040	101	803
18 Would Like GNS	5.73	1.00	104	-328	192	467	-463	601
19 Job Choice GNS	3.76	.41	142	-157	-160	023	-689	609
20 MPS	186.51	67.07	834	-137	-182	055	222	948
	Eigenvalues		6.331	2.113	1.618	1.517	1.236	
	% Variance		31.6	10.6	8.1	7.5	6.1	

a. Decimal points omitted.

b. Communalities of 6 factors with eigenvalues > 1.0

TABLE 16

JDS ITEM, MEAN, S.D., PRINCIPAL FACTOR LOADING, AND COMMUNALITY FOR THE LOWER GROWTH NEED RESPONDENTS

Item	Mean	S.D.	Factor Loading [a]					h^2 [b]
			I	II	III	IV	V	
1 Skill Variety	5.42	.90	627	-244	352	083	160	611
2 Task Identity	5.64	.98	622	-293	-183	-032	-206	674
3 Task Significance	4.92	1.21	495	064	569	-223	-239	682
4 Autonomy	5.32	1.29	787	-328	-254	004	066	810
5 Feedback Job	5.36	1.11	718	-199	101	-309	-179	733
6 Feedback Agents	4.54	1.22	300	-106	388	479	-407	675
7 Dealings with Others	4.72	1.17	208	158	708	157	199	820
8 Experienced Meaningfulness	6.18	3.00	046	079	-233	389	-650	855
9 Experienced Responsibility	5.54	.75	743	-152	-182	-019	122	640
10 Knowledge of Results	5.35	.77	681	153	-229	-222	074	596
11 General Satisfaction	5.36	.91	675	218	-176	285	147	733
12 Internal Motivation	5.57	.72	407	-096	047	-380	-287	782
13 Pay Satisfaction	4.28	1.55	348	583	-153	262	-161	648
14 Security Satisfaction	5.30	1.31	453	490	-158	026	-060	738
15 Social Satisfaction	5.13	1.03	545	465	266	039	298	715
16 Supervisory Satisfaction	5.64	.85	723	282	-039	132	022	708
17 Growth Satisfaction	5.51	.85	793	114	-184	062	189	778
18 Would Like GNS	5.39	1.02	086	-334	324	334	042	772
19 Job Choice GNS	3.08	.26	124	-528	-236	513	286	698
20 MPS	161.43	75.00	884	-315	036	-148	-084	944
	Eigenvalues		6.51	1.82	1.70	1.32	1.16	-
	% Variance		32.5	9.1	8.5	6.6	5.5	

a. Decimal points omitted. b. Communalities of 7 factors with eigenvalues > 1.0

Table 17

A COMPARISON OF ITEMS WHOSE LOADINGS

ON FACTOR I EXCEED .6 IN EITHER OR BOTH GROWTH NEED SAMPLES

Item	Loading for Low sample [a.]	Loading for High sample
MPS	884	834
Growth Satisfaction	793	835
Autonomy	787	738
Experienced Responsibility	743	687
Supervisory Satisfaction	723	667
Feedback Job	718	562
Knowledge of Results	681	594
General Satisfaction	675	744
Skill Variety	627	540
Task Identity	622	461
Experienced Meaningfulness	046	748

a. Decimal points are omitted.

Table 18

A COMPARISON OF ITEMS WHOSE LOADINGS ON FACTOR II EXCEED .3 IN EITHER OR BOTH GROWTH NEED SAMPLES

Item	Loading for Low sample [a]	Loading for High sample
Pay Satisfaction	583	797
Job Choice GNS	-528	-157
Security Satisfaction	490	655
Social Satisfaction	465	314
Would Like GNS	-334	-328
Autonomy	-328	-119
MPS	-315	-137
Feedback Agents	-106	334
Internal Motivation	-096	-442

a. Decimal points have been omitted.

Table 19 shows the comparison of loadings of internal motivation on factors 1 to 5 across the growth need groups. It can be seen that discrepancies arise with respect to factors 2, 4 and 5.

Table 19

A COMPARISON OF LOADINGS OF INTERNAL MOTIVATION ON FACTORS 1 TO 5 ACROSS GROWTH NEED GROUPS

	Factors [a.]				
	I	II	III	IV	V
Low Growth Need	407	-096	047	-380	-287
High Growth Need	500	-442	140	047	070

a. Decimal points omitted.

Factor 3 has high loadings on task significance and dealings with others, and low loadings on task identity and knowledge of results. It is essentially the same for both groups except that autonomy is seen as more important by the high growth need group.

Comparisons of Variable Scores

Table 20 shows the mean scores of the five occupational groups in the present study as well as the scores for New Zealand supervisors (Glennie, 1978) and the scores of the "typical" American male (Oldham, Hackman and Stepina, 1978). Figure 7 shows the relationship between the results for the most extreme groups in the present study (high country

Table 20

COMPARISONS OF VARIABLE SCORES SHOWING MEANS FOR THE FIVE OCCUPATIONAL GROUPS OF THE PRESENT STUDY AS WELL AS FOR N. Z. SUPERVISORS AND THE "TYPICAL" AMERICAN

Variables	High Country Farmers	Low Country Farmers	High Country Farm Workers	Low Country Farm Workers	Students	N. Z. Super-visors	"Typical" American
	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$
1 Skill Variety	6.0	5.9	5.4	5.5	5.3	5.0	4.5
2 Task Identity	6.0	6.1	5.6	5.3	5.4	4.5	4.7
3 Task Significance	5.2	5.2	5.1	4.8	4.8	5.8	5.5
4 Autonomy	6.7	6.5	5.4	4.9	5.0	5.2	4.8
5 Feedback Job	6.1	5.7	5.7	5.3	5.1	5.2	4.8
6 Feedback Agents	4.0	4.5	4.8	4.5	4.7	4.3	4.1
7 Dealing with Others	4.9	4.7	4.6	4.7	4.7	6.2	5.5
8 Experienced Meaningfulness	6.3	6.2	6.0	5.9	6.0	5.7	5.1
9 Experienced Responsibility	6.4	6.3	5.7	5.3	5.3	5.8	5.4
10 Knowledge of Results	5.7	5.6	5.3	5.5	5.1	5.2	5.0
11 General Satisfaction	5.8	5.8	5.2	5.3	5.2	5.2	4.7
12 Internal Motivation	5.8	5.8	5.6	5.6	5.6	5.4	5.5
13 Pay Satisfaction	3.4	4.0	4.9	4.9	4.2	4.7	4.2
14 Security Satisfaction	5.2	5.7	5.9	5.8	4.9	5.6	4.8
15 Social Satisfaction	5.5	5.3	5.1	5.4	4.8	5.9	5.3
16 Supervisory Satisfaction	5.7	5.9	5.7	5.7	5.4	5.5	4.8
17 Growth Satisfaction	6.0	6.1	5.6	5.4	5.3	5.5	4.7
18 Would Like GNS	5.6	5.5	5.5	5.4	5.7	5.2	5.6
19 Job Choice GNS	3.5	3.5	3.3	3.4	3.4	4.3	4.2
20 MPS	236.2	215.2	171.6	139.9	139.4	144.3	122.1

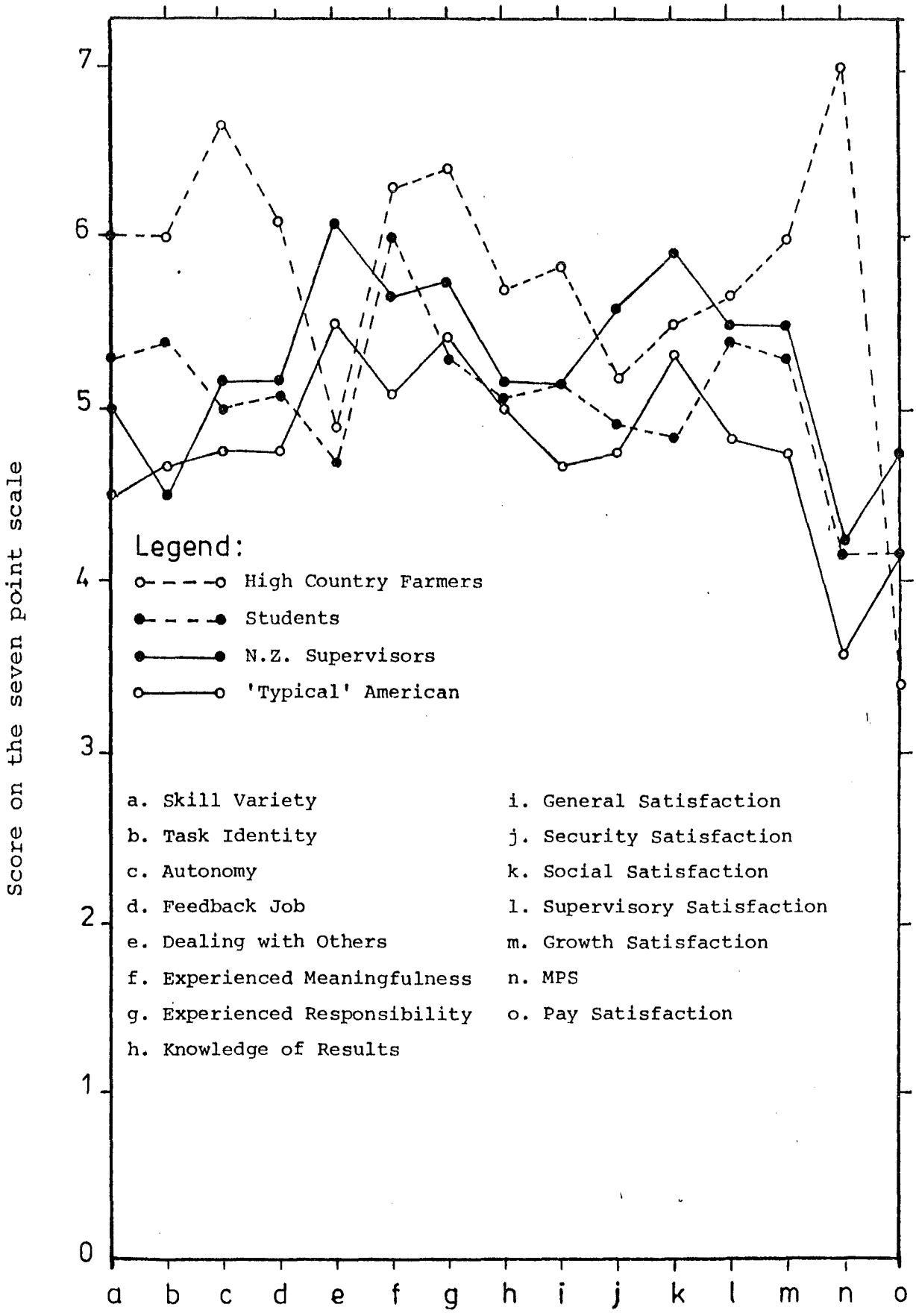


FIG. 7. Comparisons of Variable Scores.

farmers and students) and results for Glennie's study and for the "typical" American male. However, it does not include those variables on which there were no significant differences between groups in the present study (task significance, feedback from agents, internal work motivation and both GNS measures).

There are few particularly large differences between the students and the "typical" American, although they score more highly in all cases except for dealing with others and social satisfaction. Their higher scores are most marked for skill variety, experienced meaningfulness, supervisory and growth satisfaction. The students generally had lower scores than the New Zealand supervisors.

In comparison the high country farmer is extremely atypical, with his scores being, on the whole, very different from either the American or New Zealand supervisors' ones. This is most apparent by his extremely high scores for the job dimensions (except dealing with others), and the three critical psychological states. The largest differences occur for pay satisfaction, for which his score is significantly below that of any other group, and MPS, for which his score is exceptionally high.

CHAPTER SIX

DISCUSSION OF RESULTS

The results obtained are best discussed in two sections, firstly the job satisfaction of farmers and farm workers as measured by the JDS and secondly the efficacy of the model and the moderating effects of GNS in this context.

Job Satisfaction of Farmers and Farm Workers

One of the main points of interest was whether, given a large sample of farmers and farm workers, there would be significant differences between groups on the basis of occupation, age or education. All these factors have been found to be of importance in previous job satisfaction studies (Oldham, Hackman and Stepina 1978).

Education

In their extremely comprehensive study Oldham, Hackman and Stepina (1978) found that education did have an effect, those with higher levels having higher job dimension, MPS and GNS scores. However, in the present study education appeared to have no effect at all. This is perhaps best explained by the peculiar nature of the farming population, in that there is not necessarily a high correlation between education and

intelligence. Level of education, at least in the past, was believed to have little influence on farming ability or success, and was therefore often considered to be irrelevant, and much more emphasis was placed on variables such as commonsense and general management ability. Given the age ranges of the farmer and farm worker samples the result is not surprising. One might anticipate changes in this relationship as increasing proportions of farming cohorts are exposed to tertiary level farming education.

Age

Oldham, Hackman and Stepina found age to have an important effect, with the highest internal motivation and satisfaction scores occurring for the older age groups. Also 20-39 year olds had the highest GNS scores, and the over 50 year olds the lowest.

However, in the present study "task significance" was the only variable which showed any marked age effects (Figure 2), and the differences were not sufficiently clear to draw any conclusions. There seemed to be a general upward trend with age, but this was very erratic. Certainly, there were no significant differences on the variables affected in the Oldham, Hackman and Stepina studies.

This went somewhat against expectations, and particularly so for the farmer groups. It was expected that they, especially, should substantiate Oldham, Hackman and Stepina's results, at least as far as GNS

went. The 20-39 year olds need to develop and prove themselves, and so require a challenge while the older men have met their challenges and developed their farms, and are more likely to be content with the status quo which they have created. Differences were also expected because of the changing family and financial responsibilities at different ages. For the first decade or so many young farmers are faced with problems of large mortgages on what may be relatively undeveloped, low producing land, and this is generally at the time of greatest family expenses. Once established, the older farmer is usually financially secure, with his developed farm requiring less investment of labour or money. It was thought that this may lead to differences on variables such as autonomy (the young farmer is more constrained by his finance/bank manager and the dictates of his land's needs, while the older farmer is often freer to pursue particular interests, such as developing a stud flock of sheep), job security and income satisfaction, most particularly the latter.

Occupation

A significant occupation main effect was found. The differences between occupational groups are shown most clearly by the discriminant scores contrast (Table 9, Figure 6), which shows the relationship of each group to the others. It is seen that significant differences exist between all groups other than low country farm workers and students, but with an overall

basically bipolar distribution between farmers and their employees. Overall the farmers are scoring significantly more highly. Table 10 indicates that that the discriminating function is effectively a composite of three variables:
1) Autonomy, 2) Experienced responsibility
3) Motivation potential. Thus, it would seem that this is a measure of job satisfaction with a heavy stress on personal independence. Obviously, for this sample, some of the variables (task significance, feedback from agents, dealing with others, experienced meaningfulness, internal motivation, and the two GNS measures) do not serve to discriminate at all between occupational groups. However, this does not decrease their importance as descriptive variables, and the GNS measures are of considerably more utility when used on an across respondent basis. No differences are probable for the job dimension of dealing with others, as the farmer and his employees generally see the same people in the context of their work and have roughly the same amount of social interaction. On the other hand, it was expected that farm workers would have higher scores for the feedback from agents dimension as they should receive feedback from the farmer, while the farmer has no "supervisor" to provide him with the equivalent feedback. It was also thought that farmers might have scored more highly than farm workers on task significance as the farmers can see what they do as making an important contribution to the country's

economy. It is possible that the lack of difference here is due to the farmers seeing the task significance dimension in their work from a macro rather than a macre perspective. Thus, in the short term he sees his job as having little impact on the lives of other people. The high degree of personal involvement and financial commitment required of the farmer in his work would seem to suggest that he should score more highly than farm workers on experienced meaningfulness and internal work motivation. However, there were no significant differences on these variables.

Among the core dimensions the greatest difference occurs for autonomy, with farmers, as a whole, scoring significantly higher than the other three groups. This difference is hardly unexpected as the farmer is essentially his own boss and therefore must see his job as giving him more autonomy than his employees will see theirs.

Farmers also have significantly higher scores for skill variety and task identity. This is also to be expected. The employee may be given only part of a job to do, he is involved in only some of the farming activities and generally will have the more mundane tasks. The farmer is in a different position. Even though he may not personally undertake each aspect of every task, he is responsible for the planning and implementation of all stages.

With regard to variety, the farmer has perhaps one of the most varied of jobs, requiring a large

number of practical skills to be used at different times of the year, as well as an extensive knowledge of stockmanship and managerial, organizational, and accounting abilities. On the other hand, farm workers vary from those with a narrow range of tasks (tractor drivers, musterers, shepherds), to those who are more "jacks of all trades". Even the latter will seldom have as much variety as the farmer, and never the same overall perspective or responsibility. This too was reflected in the data, with farmers scoring more highly on experienced responsibility.

The difference was less clear cut for knowledge of results, but once again farmers scored more. Farmers also had significantly higher scores for growth satisfaction. This seems logical as not only is the farmer in a position where he can often modify his job in order to attain this satisfaction (by the development of subsidiary interests if necessary), but all the work he does is in his own interest, and the developments on the farm are essentially an expression of self. These factors will also account for his higher scores for general satisfaction.

Higher levels of job feedback were experienced by not only farmers, but by high country farm workers as well. This is probably best accounted for by the different nature of work for high and low country farm workers. In the high country, mustering is a large component of the work. This requires working closely with the "boss" and other men, and a high degree of

skill in dog handling and general stockmanship, with rapid and clear feedback from the job, all very unlike the work of, for example, a low country tractor driver.

Perhaps the most interesting result was the difference between groups on the pay/income satisfaction variable. Satisfaction levels were not particularly high for any group, but by far the least satisfied were the high country farmers, then the low country farmers, students, and most satisfied of all, the farm worker groups. This seems to show an inverse relationship with the income of each group, and so must be considered further. The result is perhaps best interpreted in terms of the Facet Satisfaction Model proposed by Lawler (1973). This states that a person's perception of what his reward level should be is influenced by various factors, most especially by job inputs and job demands (skills, abilities, experience, training, effort, education, responsibility, difficulty, organizational level etc). The greater these inputs are perceived to be, the greater the outputs expected. Thus, those with high job inputs must receive more rewards than those with low inputs, or else dissatisfaction will result.

In accordance with this, farm workers see their income as being fairly well in proportion to their inputs. The students' lower satisfaction can perhaps be best explained by their lack of experience with the relative worth of money and work, and also

by the fact that they are paid less for doing essentially the same job as farm workers, but do not take into account the differences in age, skill, experience and term of employment.

The farmers do have a far greater income, but here there are confounding variables such as the great variations in income from year to year. Although large profits may be made in some years, the losses in bad years can be extremely severe. For established farmers this is not as serious a matter, as the farm will need relatively little expenditure. However, in the case of developing farms which give small returns while requiring high capital investment, this is very serious.

However, in a time of moderate prosperity, this is not an adequate explanation. It is therefore postulated that, although the farmer's usual level of income may be fairly well in proportion to the job inputs and job demands mentioned by Lawler, it most certainly is not in proportion to the very large capital investment the farmer (and most particularly the high country farmer) has. The larger this investment (in the area studied it would be anything from $250,000 to several million dollars), the larger the resulting financial commitments, risks and responsibilities. It is suggested that because of this, the farmer sees his income as disproportionate, and therefore is seen as dissatisfied on this variable.

The differences between high and low country farmers can be best explained in terms of different levels of capital investment, differences in the risk factor (high country farmers are more likely to make or lose large amounts of money, and they are also more at the mercy of weather and seasonal variations) and the much more expensive cost of living. Due to the isolation it is usually necessary to send children to boarding schools. Larger cars and four-wheel drive vehicles are essential, and for the very isolated stations an aeroplane may be more of a necessity than a luxury.

The differences in security satisfaction were also of interest. Students had the lowest scores on this variable, probably because the jobs they were relating their answers to were temporary ones, and also because they were all at a transitional stage of life. Both groups of farmers, and most especially high country farmers, scored lower than the farm workers for security satisfaction. This is perhaps due to two factors. Farmers' incomes fluctuate. Prices and production may be good one year, followed by several of low production and/or depression. This is apt to be more serious in the high country where there is little diversification or possibilities for it. If a commodity such as beef slumps in price the low country farmer can concentrate on mutton, wool or crop production. In the high country the two main products are beef and wool

(not mutton), so that when the price of one is depressed the effect is serious. In recent years some high country farmers have been attempting to diversify into tourism (e.g. Erewhon) and deer farming (e.g. Erewhon, Mesopotamia) in an effort to counteract this.

A second factor possibly contributing to security satisfaction is climate. The high country farmer is more likely to suffer large losses due to climatic conditions. In the 1967 snowfall, Lilyburn Station in the Mackenzie Country had a 1% lambing, and in the 1969 snowfall Erewhon had a 5% lambing. In the 1973 snowfall Surrey Hills (Mid Canterbury) lost 2000 sheep and 100 cattle.

Finally, by far the most significant differences between groups occurred with the Motivating Potential Scores, with high country farmers perceiving their jobs as having the most motivating potential, and low country farmers also have particularly high scores. Low country farm workers and students had the lowest scores with high country farm workers falling in between. Since the MPS is derived from the scores of core dimensions, this result had already been indicated by scores on the various job dimensions.

Multiple Discriminant Analysis

This was done to show how "true" a picture the results gave of each group. The percentage of correct classifications (see Table 5) was very high

for the farmer groups, and most especially for the low country farmers, with students seeming to be the most heterogeneous of all the groups. With the exception of the students, these percentages are high enough to conclude that each of the groups is a distinct class of its own. The factors which affect this have already been discussed. The less homogeneous nature of the student group is best attributed to a large diversity of backgrounds, relative lack of farming experience and less developed expectations concerning work in this industry.

The Job Dimensions Model

The two major points of concern with this model are the dimensionality of jobs and the effects of GNS as a moderating variable.

Although many of the correlations (Table 7) were significant at the .01 level, the majority of these correlations do not seem very high and only a few will be selected for discussion.

In agreement with previous results (Dunham 1976, Hackman 1975, Pierce and Dunham 1978) Oldham, Hackman and Stepina (1978) found their job dimensions to be moderately intercorrelated, as did Glennie (1978) in a recent New Zealand study. In the present study, the job dimensions generally do show a moderate degree of intercorrelation, although in three cases the correlations were not at all significant. These were; task significance/autonomy,

task significance/task identity and feedback from agents/skill variety. The last two also were non-significant in Glennie's study. These differences are hardly surprising, as the dimensionality of job characteristics has been found to vary from sample to sample (Dunham 1976, Dunham, Aldag, and Brief 1977, Oldham, Hackman and Stepina 1978) and this may well be accentuated by cultural differences between New Zealand and the United States.

The MPS is significantly correlated (.01 level, correlations varying from 0.375 to 0.790) with all job dimensions except dealing with others. This is to be expected as, apart from feedback from agents, it is effectively a composite of these variables.

Autonomy is significantly correlated with task identity (0.460), experienced responsibility (0.458) and growth satisfaction (0.522). This is consistent with the results already discussed. The more autonomy a worker has, the more responsibility he experiences, the more he can manipulate his work to allow opportunities for personal growth, and the more likely he is to score highly on task identity.

A particular subset of variables - knowledge of results, general satisfaction, internal motivation, security satisfaction and social satisfaction - showed extremely high correlations, varying from .93 to .97. Correlations for these variables with pay satisfaction were also very high, varying from .83

to .89. It seems, therefore, that these variables are measuring much the same thing and that there is one underlying factor of importance here; - a "general satisfaction", more pervasive than that defined, embracing these factors. These exceptionally high correlations have not occurred in other studies, and so seem to be a peculiarity of the New Zealand farming samples employed in this study.

The second MANOVA showed a definite Growth Need main effect with a significant difference between the high and low growth need groups, as indeed it should if the JDS has construct validity.

The relationships which, according to Hackman and Oldham's model, should show the moderating effects of GNS, were looked at especially (Table 14). Only three of the correlations seemed to give strong support to the model, with significantly higher correlations for high GNS subjects between experienced meaningfulness and task variety, experienced meaningfulness and general satisfaction, and knowledge of results and feedback from agents. Smaller, though non-significant, effects were found between experienced meaningfulness and task identity and between experienced meaningfulness and task significance.

However, many of the correlations lent little or no support to the model, with insignificant differences in the predicted direction for experienced responsibility/general satisfaction, and knowledge of results/job feedback, and with an opposite effect

for experienced responsibility/autonomy and for knowledge of results/general satisfaction.

The relationship between the core dimensions and the outcome measures (general satisfaction and internal work motivation) showed GNS to have little moderating effect, with no significant differences between any correlations.

These results do not provide much support for Hackman and Oldham's model, and do not agree with results of other studies. Oldham, Hackman and Stepina found that;

> "With the exception of task identity, there are substantial relationships between the core job dimensions and the corresponding psychological states. In addition, the core dimensions and the psychological states are substantially and positively related to the outcome measures." (P.19).

Not only does the model not seem to be fully borne out in this case, but GNS seems to have a far stronger moderating effect for relationships where it was not specifically predicted to do so. This is particularly so in the case of experienced meaningfulness. Not only do high GNS subjects have significantly higher correlations than low GNS subjects between experienced meaningfulness and factors predicted by model (skill variety, internal work motivation and general satisfaction), but they also have significantly higher correlations between experienced

meaningfulness and job feedback, autonomy, social satisfaction, supervisory satisfaction, growth satisfaction and MPS. It is of interest to note that the correlations between job feedback and the four main job dimensions are significantly higher for low GNS subjects. Obviously job feedback is a variable of particular importance for low GNS subjects in this context, but the reasons for this remain unclear.

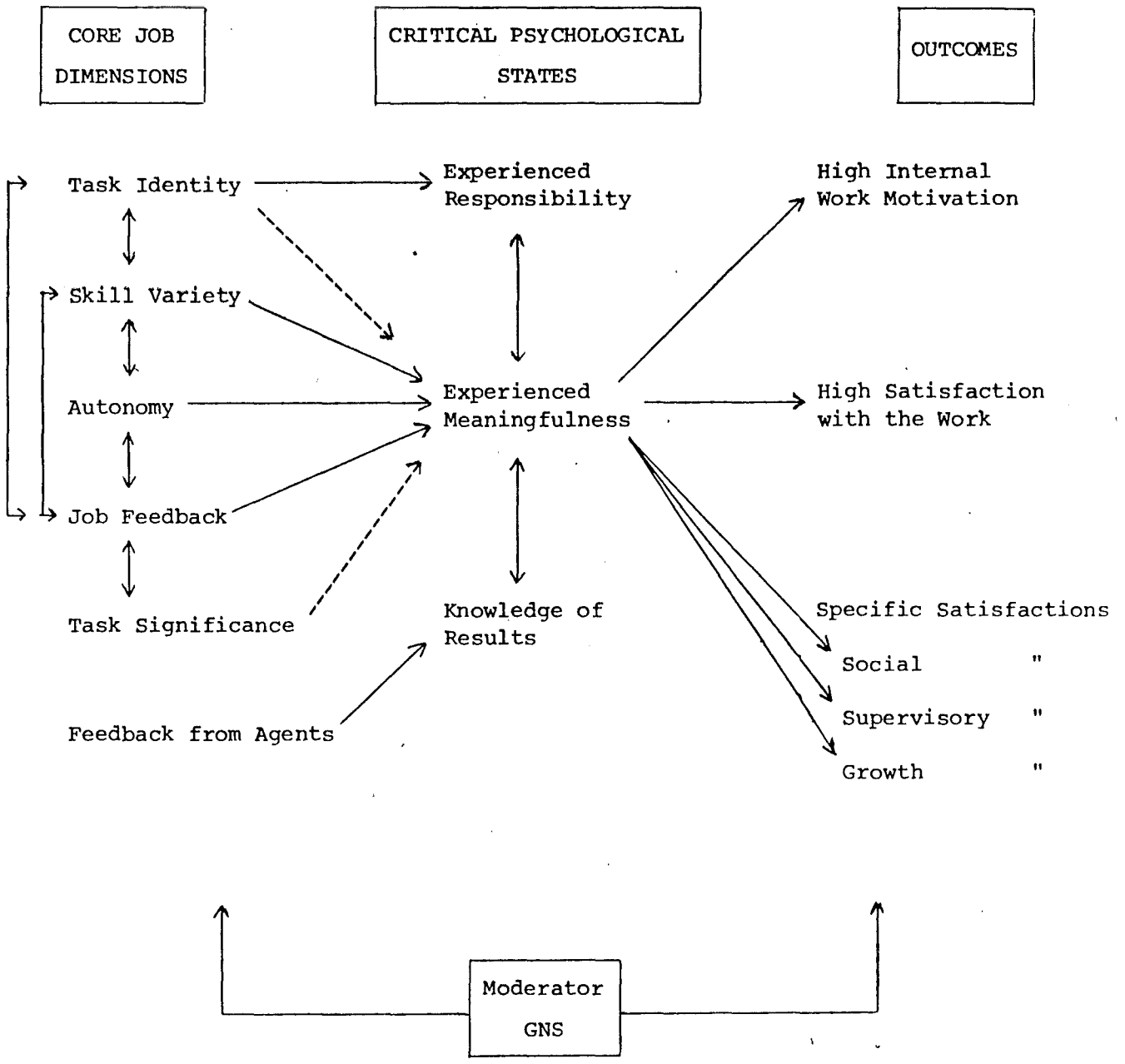
These results do not necessarily cast doubt on the validity of the model, though they do on its generalisability. Obviously it fits some populations better than others and changes with the differences of dimensionality across samples.

The present study deals with an extremely specific population, with overall results being different to those obtained in American studies. In this present context Hackman and Oldham's model seems inadequate and it is therefore suggested that an amended form might be more appropriate, (Figure 8).

For this study experienced responsibility and knowledge of results do not show the relationships predicted by the model, whereas experienced meaningfulness seems to act as the pivot of the model, showing the moderating effects of GNS to a significant extent in almost every relationship. It therefore seems that, in the New Zealand farmer/farm worker context, experienced meaningfulness is a particularly critical psychological state.

Figure 8

AMENDED VERSION OF THE
JOB CHARACTERISTICS MODEL OF WORK MOTIVATION



——→ Significant effect.

----→ Definite trend, though not quite significant.

The results did not support Umstot, Bell and Mitchell's (1976) finding that there are stronger relationships between MPS and outcomes (general satisfaction, internal motivation) for high GNS subjects.

The partial correlation analysis showed no indication of a growth need strength moderating effect.

The principal components factor analyses showed the high and low growth need groups to be basically similar in their factor structure. However, for factor 1 there is a high loading for meaningfulness for the high GNS group, and a very low one for the low GNS group. It therefore seems that experienced meaningfulness is the best discriminating variable between high and low GNS subjects. If factor 1 is viewed as representing the motivating aspects of the job per se, rather than extrinsic factors such as pay and security (which have low loadings on factor 1 for both groups), then experienced meaningfulness can be seen as an intrinsic motivating aspect for the high growth need person while being ignored as such by the low growth need respondent.

The high weights for factor 2 on pay satisfaction, security satisfaction and social satisfaction, as well as the negative weights on job choice, would like GNS, autonomy, and MPS show this factor to be one of extrinsic motivation, or

external reward. Again, the differences between the groups are small. The high growth need sample see feedback from agents as part of the external reward (in contrast to the low growth need group), and they also see internal motivation as being more clearly separated from external reward.

High loadings on task significance and dealings with others, and low loadings on task identity and knowledge of results, indicate that factor 3 should be provisionally interpreted as a self-importance factor. Autonomy is seen by the high growth need group to be a component of self importance, but not so by the low growth need group.

Variation Within JDS Items

In general, a variable needs to vary to a certain degree before it can be an effective discriminator and/or predictor. Seven of the JDS items (when applied to the present sample) had variances of less than one (Table 5a, see Appendix A). It would be necessary to restructure the scale or questionnaire item itself for a variable such as job choice, if one was to attempt a more precise analysis using the JDS with respect to New Zealand farmers and farm workers.

Comparisons of Variable Scores

The New Zealand agricultural student is not particularly different from the "typical" American

in the degree to which the core job dimensions are present in his job, and in his reactions to them. His lower scores for dealing with others (shared by all occupational groups in the present study) and social satisfaction (for the other groups this is about the same as for the "typical" American) are in keeping with the nature of a farmer or farm worker's job. He has few opportunities for, or need of, social interaction in his work, and is relatively isolated socially. These results are also in marked contrast to results obtained by Glennie.

However, the student does find his job to be considerably more meaningful, with greater skill variety, supervisory and growth satisfaction than does the "typical" American, and he has an overall higher level of general satisfaction. His high scores for experienced meaningfulness and growth satisfaction are probably contributed to by the fact that, for the student, this is essentially a learning exercise and a component of his studies. A high degree of variety is general in a farm worker's job (unless he is employed to do something specific such as tractor driving). His lower scores than those gained by New Zealand supervisors for pay and security satisfaction can be attributed to the same reasons as those discussed earlier.

The high country farmer (the other extreme out of the five groups in the present study)

appears to be a most atypical worker, with significantly lower scores than those gained by the other groups for dealing with others and pay satisfaction, but with very high scores for the main core dimensions. His scores for the core dimensions are best attributed to the small business and craftsman components of his job being extremely high, and this also contributes to his high scores for the psychological states. His high scores on the core dimensions are reflected by an exceptionally high score for the MPS. The only variables on which his scores are not significantly higher than those for other groups are dealing with others, security satisfaction, social satisfaction, supervisory satisfaction and pay satisfaction. The reasons contributing to his scores on the various factors have mostly already been discussed in a previous context. It is of interest to note that, despite the lack of any real supervision, the high country farmer is more satisfied with its equivalent (that which is informally given by the bank manager, fellow farmers, stock and station agents) than are the "typical" American and New Zealand supervisors with their formal supervision. Other than the students the groups in the present study had very similar scores on this variable.

The present results support Oldham, Hackman and Stepina's finding that the higher a job's level, the higher it is on core dimension scores. In this

study farmers generally had significantly higher scores for the job dimensions. However, the only satisfaction measure for which they scored significantly more was general satisfaction, and the differences were non-significant for growth need strength. Oldham, Hackman and Stepina found that employees in organizations which are part of larger firms are more highly satisfied than those who work in self-contained organizations. This is not supported by the present results (taking farms as self-contained units) as satisfaction levels are very high. This is perhaps due, in part, to the smallness of a farming concern in terms of the number of people directly involved in the work. This tends to lead to an unusually high degree of personal involvement, and this, plus the nature of the work itself, may mean that farms should not be equated with American self-contained organizations.

However, the finding that high MPS scores were typically found in small organizations (i.e. farms) was substantiated.

The results from the present study will not be discussed in relation to other farming studies as the different nature of these studies provides little basis for comparison.

Limitations of the Study

It is now felt that although this study permitted a good test of the JDS in a rural setting

the theoretical model is possibly a little narrow for use with farmers and farm workers. There are a number of variables which are not accounted for in the questionnaire, but which may be all important in determining the satisfaction of the rural worker. These are mostly variables extraneous to the basic work situation, but with a considerable bearing on it. It is possible that the effects of these contextual variables are more direct than is typically the case with urban workers and may, in some cases, be similar to those affecting owners of small to medium urban businesses. Some are unique however. The question of isolation is one that is of particular importance. The farmer/farm worker on an isolated sheep station is different to the one in close proximity to the city, as is partly shown by the differences between high and low country farmers and farm workers. It would be of interest to determine to what extent the environment (isolation, wide open spaces, mountains) is an important component of the job. Lack of social facilities, distance from schools and town are all factors which should be considered, as is the marital status of the farmer or farm worker. The study also fails to take into account whether or not the farm worker is employed with his wife in the traditional "married couple" role.

Factors such as age of starting farming/ working on farms, and the reason for doing so, may be important, especially as the decision to farm is

often not a deliberate one, but rather a fulfillment of family expectations, somewhat akin to the traditions of association with particular professions some families had in earlier times.

There was a particular difficulty with the students in determining what job they should relate their answers to, and whether the attitude reflected in their answers was their general one. Also, it may well have been of interest to see if there were differences related to future prospects and background experience.

This could also have been investigated for the farm worker sample. Differences may well exist between farm workers who are farmers' sons (often working on their family farm and with expectations of owning a farm) and those who are permanent labourers with few ambitions or expectations concerning ownership or even managerial responsibilities.

Use of the Results in a Practical Context

Those results pertaining to the farmer are of little more than academic interest - he generally scores very highly except for on the income and security variables, and little can be done to rectify that. The farmer is generally in a very good position to adapt his job to suit himself.

Results for the farm workers and students may be of interest to the farmer/employer. This study gives some idea of how the New Zealand farm worker feels about his job, and the importance of job

dimensions and individual characteristics in it, and thus should help to isolate areas of dissatisfaction or potential dissatisfaction. However, although general satisfaction is lower than that for farmers, it is still fairly high relative to other jobs studied previously. The present results do not seem to have isolated any areas which particularly need attention. This may well be due to the large individual differences between employers cancelling each other out.

Ideally, an instrument such as a modified JDS could be of use if administered and analysed for each individual case. However, Hackman and Oldham (1974) and Oldham Hackman and Stepina (1978) make the point that the JDS is not recommended for use in diagnosing the jobs of single individuals, as reliabilities of the job characteristic scales may not be high enough to warrant job changes on the basis on individual scale scores. Also, because of the typically close relationship between the farmer and his employees, and consequent lack of anonymity, it might be difficult to obtain valid results. Furthermore, the writer remains unconvinced that the use of such measures would yield results which would surprise or be of use to the farmer as an employer. More so than most employers he is in a position to appreciate his employees' needs and satisfactions, both in terms of work and their non-work lives.

CHAPTER SEVEN

SUMMARY AND CONCLUSIONS

A study was undertaken to investigate the importance of job dimensions and individual characteristics in the job satisfaction of New Zealand farmers and farm workers. The instrument used was a modified form of Hackman and Oldham's Job Diagnostic Survey (1974, 1975). Not only was the study of interest as an investigation of the job satisfaction of farmers and farm workers, but it was also important as a test of the JDS in a previously unresearched setting.

The JDS was adapted slightly to suit the rural context and was given to 201 male subjects from five occupational groups; high country farmers, low country farmers, high country farm workers, low country farm workers and agricultural students.

The major finding in the study was the presence of a significant occupation main effect between the five occupational groups. This was seen in 13 of the 20 JDS variables and (as is clearly shown by the discriminant scores contrast) it was particularly evident for autonomy,

experienced responsibility and MPS. At the same time, contrary to expectations, no main effect was found for education (probably due to the lack of emphasis on education as a prerequisite for farming), and only a relatively minor one for age (task significance was the only variable that showed any effect).

Closer study of the occupation main effect yielded a number of interesting results. Overall the farmer groups scored more highly than the farm worker groups, with the farmers (especially high country) perceiving their job as being particularly high in its degree of autonomy, skill variety, task identity and job feedback, not quite as high for task significance, and as being relatively low in its degree of feedback from agents and dealing with others. The three farm worker groups generally saw their jobs as being somewhat lower on these dimensions, though about the same for feedback from agents and dealing with others. These last two dimensions, and also task significance, did not serve to discriminate among groups.

These results tend to indicate that there is little need or scope for enrichment of the farmer's job, and not much more for the farm worker. This was also borne out by relatively high scores for all groups on the psychological state variables. All scores were very high for experienced meaningfulness, with the farmer groups having significantly higher scores for experienced

responsibility and knowledge of results.

High country farmers had surprisingly low scores on the pay satisfaction variable, particularly in comparison to the other groups. It was concluded that this was due to a disproportionate relationship between job outputs (i.e. pay) and inputs (work, experience, skill and financial investment), in accordance with Lawler's Facet Satisfaction model (1973). The other occupational groups presumably have a more proportionate relationship between job inputs and outputs and are therefore relatively more satisfied. It was also seen that, although levels of security satisfaction were not particularly low, farmers were less satisfied with their level of security than were farm workers (students were lower). It was concluded that the differences in responsibility and risk would generally account for this.

In general scores for the other satisfaction variables were moderately high with farmers having higher scores for growth and general satisfaction, and all groups having much the same scores for social and supervisory satisfaction.

The multiple discriminant analysis indicated that each of the farmer and farm worker groups was a distinct class of its own, but with a somewhat more heterogeneous student group.

The two most extreme scoring groups of the present study (students, high country farmers) were compared with Oldham, Hackman and Stepina's

"typical" American and also with New Zealand supervisors. The high country farmer, in particular, was found to be most atypical, having significantly higher scores than the other groups on most variables, but with the notable exception of pay satisfaction for which his score was significantly lower.

The overall dimensionality of the farmers' and farm workers' jobs was investigated. A moderate degree of intercorrelation was found between job dimensions, though this was less than that found in previous studies (Dunham 1976, Hackman and Oldham 1975, Pierce and Dunham 1978, Oldham, Hackman and Stepina 1978, Glennie 1978). This was not particularly surprising as the dimensionality of job characteristics has been found to vary from sample to sample.

The extremely high correlations between some of the variables (knowledge of results, general satisfaction, internal motivation, security satisfaction and social satisfaction) are a peculiarity of this study. They seem to indicate an important underlying factor - a broader "general satisfaction" than that defined.

The moderating effect of growth need strength was also investigated. No indication of moderation was given by the partial correlations analysis, but the second MANOVA showed a growth need main effect. Principal components factor analyses were carried

out on "high" and "low" growth need groups and the results of these showed that growth need strength had a definite moderating effect.

However, the results of the factor analyses did not provide much support for Hackman and Oldham's model, with only three of the predicted relationships showing a significant degree of moderation, four showing a limited effect (not significant) and with an opposite effect to that predicted for two of the relationships. GNS was also seen to have a stronger moderating effect for relationships where it was not specifically predicted to do so. This was particularly true in the cases of experienced meaningfulness and job feedback. Of the three psychological states, only experienced meaningfulness showed any of the predicted relationships, appearing to act as the central pivot of the model. For the New Zealand farmer and farm worker therefore, experienced meaningfulness appears to be a particularly crucial psychological state.

It must be concluded that, in the present context, Hackman and Oldham's model is inadequate. As this report deals with samples from specific populations, these results cannot be taken as casting doubt on the model's validity. On the other hand, they do question the model's generalisability.

The high and low growth need groups were

shown to have basically similar factor structures. Experienced meaningfulness seemed to act as the best discriminating variable between high and low GNS subjects. Factor 1 emerged as a factor representing the more intrinsic motivating aspects of the job, factor 2 as a factor of extrinsic motivation and factor 3 as one of self importance.

In conclusion, the present study has given some insight into the importance of job dimensions and individual characteristics in the job satisfaction of New Zealand farmers and farm workers. However, the results are more of academic interest than of practical utility as they have isolated no remediable areas of dissatisfaction. The study has also proved of value in that it has tested the JDS model in a new context and the results obtained from it may be of help in isolating the specific characteristics of samples which lead to differences of dimensionality between jobs.

REFERENCES

ARGYRIS, C. Personality and organization theory revisited. Administrative Science Quarterly 1973, 18, 141-166.

BALDOCK, C.V. Vocational aspirations of farm boys and non-farm boys in New Zealand. Rural Sociology, June 1971, 36, 2, 157-172.

BARNES, C.L. Employee reactions to job characteristics. A replication study in New Zealand. Unpublished Masters thesis, University of Canterbury 1975.

BARNES, C.L. and JAMIESON, B.D. Reactions to job characteristics among Samoan, Maori and pakeha employees. New Zealand Psychologist 1977, 6, 14-24.

BLOOD, M.R. Work values and job satisfaction. Journal of Applied Psychology 1969, 53, 450-459.

BLOOD, M.R. and HULIN, C.L. Alienation, environmental characteristics and worker responses. Journal of Applied Psychology 1967, 51, 284-290.

BRIEF, A.P. and ALDAG, R. Employee reactions to job characteristics: A constructive replication. Journal of Applied Psychology 1975, 60, 182-186.

CANT, R.G. A case study in outmigration. Movement of adult farm workers from the Selwyn-Ashburton electoral district during the period 1963-1966. Paper delivered at the Fifth New Zealand Geography Conference 1967.

CANT, R.G. and WOODS, M.J. An analysis of factors which cause job satisfaction or dissatisfaction among farm workers in New Zealand. Agricultural Economics Research Unit (Lincoln College) 1968.

CANT, R.G. Guidelines for successful labour management. Paper delivered at Third West Coast Farmers Conference, Greymouth, N.Z. July 28-29, 1971.

DAVIS, L.E. and TAYLOR, J.C. (Eds.) Design of Jobs. Penguin Books 1972.

DUNHAM, R.B. The measure and dimensionality of job characteristics. Journal of Applied Psychology 1976, 61, 404-409.

DUNHAM, R.B. Reactions to job characteristics: The moderating effects of the organization. Academy of Management Journal 1977, 20, 42-65.

DUNHAM, R.B., ALDAG, R.J. and BRIEF, A.P. Dimensionality of task design as measured by the job diagnostic survey. Academy of Management Journal 1977, 20, 209-223.

ECONOMIC REVIEW OF NEW ZEALAND AGRICULTURE 1977. Ministry of Agriculture and Fisheries, Economics Division.

1975/1976 FARMING STATISTICS BULLETIN No. 3. Employment and Capital Expenditure. Department of Statistics., January 1978.

FEIN, M. Job enrichment: A re-evaluation. Sloan Management Review, Winter 1974, 69-87.

FERGUSON, G.A. Statistical analysis in psychology and education. 3rd Edition. McGraw-Hill, 1971.

GASSON, R. Socio-ecomic status and orientation to work: The case of farmers. Sociologica Ruralis 1974, 14, 127-141.

GOLDTHORPE, J.H., LOCKWOOD, D., BECHHOFER, F., and PLATT, J. The affluent worker: Industrial attitudes and behaviour. Cambridge: University Press, 1968.

HACKMAN, J.R. and LAWLER, E.E. Employee reactions to job characteristics. Journal of Applied Psychology 1971, 55,

HACKMAN, J.R. and OLDHAM, G.R. The job diagnostic survey: An instrument for the diagnosis of jobs and the evaluation of job redesign projects. Technical Report No. 4. Department of Administrative Sciences, Yale University, 1974.

HACKMAN, J.R. and OLDHAM, G.R. Development of the job diagnostic survey. Journal of Applied Psychology 1975, 60, 159-170.

HACKMAN, J.R. and OLDHAM, G.R. Motivation through design of work: Test of a theory. Organizational Behaviour and Human Performance 1976, 16, 250-279.

HERZBERG, F. The motivation to work. New York, Wiley, 1959.

HODGE, R.W., SIEGEL, P.M. and ROSSI, P.H. Occupational prestige in the United States, 1925-1963. American Journal of Sociology 1964, 70, 286-303.

HULIN, C.L. and BLOOD, M.R. Job enlargement, individual differences, worker responses. Psychological Bulletin 1968, 69, 41-55.

INKELES, A. and ROSSI, P.H. National comparison of occupational prestige. American Journal of Sociology 1956, 66, 329-339

INKSON, J.H.K. Self-esteem as a moderator of the relationship between job performance and job satisfaction. Journal of Applied Psychology 1978, 63, 2, 243-247.

INKSON, J.H.K. New Zealand workers' attitudes: Reply to Robinson. New Zealand Psychologist, May 1978, 7, 1, 15-17.

JAMIESON, B.D. Reactions to job characteristics: Reply to Robinson. New Zealand Psychologist, May 1978, 7, 1, 18-20.

KATZ, R. Job longevity as a situational factor in job satisfaction. Administrative Science Quarterly 1978, 23, 204-223.

KORMAN, A.K. Toward a hypothesis of work behaviour. Journal of Applied Psychology 1970, 54, 31-41.

KORMAN, A.K. Industrial and organizational psychology. Englewood Cliffs, N.J., Prentice-Hall, 1971.

LAWLER, E.E. Motivation in work organizations. Belmont, California, Wadsworth, 1973.

McCLATCHY, D. Report on a survey of farm labour in Patangata County, Hawkes Bay, 1965/66. Agricultural Economic Research Unit (Lincoln College) Publication No. 34, 1966.

MORRIS, J.L. and CANT, R.G. The nature and extent of the farm labour shortage in Cheviot County, Canterbury. Agricultural Economic Research Unit (Lincoln College), Publication No. 38, 1966.

NEW ZEALAND OFFICIAL YEARBOOK. Department of Statistics, 1977.

OLDHAM, G.R., HACKMAN, J.R. and PIERCE, J.S. Conditions under which employees respond positively to enriched work. Journal of Applied Psychology 1976, 61, 395-403.

OLDHAM, G.R., HACKMAN, J.R. and STEPINA, L.P. Norms for the job diagnostic survey. Technical Report No. 16, School of Organizational Management, Yale University, July 1978.

PIERCE, J.L. and DUNHAM, R.B. Task design: A literature review. Academy of Management Review 1976, 1, 83-97.

PIERCE, J.L. and DUNHAM, R.B. The measurement of perceived job characteristics: The job diagnostic survey versus the job characteristics inventory. Academy of Management Journal 1978, 21, 123-128.

PORTER, L.W., LAWLER, E.E. and HACKMAN, J.R. Behaviour in organizations. New York, McGraw-Hill, 1975.

ROBINSON, V.M.J. Job reactions of New Zealand manual workers: A theoretical comment. New Zealand Psychologist, May 1978, 7, 1, 11-14.

SIMS, H.P. and SZILAGYI, A.D. Leader reward behaviour and subordinate satisfaction and performance. Organizational Behaviour and Human Performance 1975, 14, 426-438.

SIMS, H.P. and SZILAGYI, A.D. Job characteristics relationships. Individual and structural moderators. Organizational Behaviour and Human Performance 1976, 17, 211-230.

SIMS, H.P., SZILAGYI, A.D. and KELLER, R. The measurement of job characteristics. Academy of Management Journal 1976, 19, 195-212.

SMITH, P.C., KENDALL, L.M. and HULIN, C.L. The measurement of satisfaction in work and retirement. Chicago, Rand McNally, 1969.

STEEVES, A.D. Dissatisfaction and the farm-nonfarm work context. Social Forces 1969, 48, 224-232.

STONE, E.F. The moderating effect of work-related values on the job scope-job satisfaction relationship. Organizational Behaviour and Human Performance 1976, 15, 147-167.

STONE, E.F. and PORTER, L.W. Job characteristics and job attitudes: A multivariate study. Journal of Applied Psychology 1975, 66, 57-64.

STONE, E.F., MOWDAY, R.T. and PORTER, L.W. Higher order need strengths as moderators of the job scope-job satisfaction relationship. Journal of Applied Psychology 1977, 62, 4, 466-471.

TAYLOR, F.W. The principles of scientific management. In Weir, M. Job satisfaction. Fontana/Collins, 1976, 63-69.

TURNER, A.N. and LAWRENCE, P.R. Industrial jobs and the worker. Boston, Harvard University School of Business Administration, 1965.

UMSTOTT, D.D., BELL, C.H. and MITCHELL, T.R. Effects of job enrichment and task goals on satisfaction and productivity: Implications for job design. Journal of Applied Psychology 1976, 61, 379-394.

WOODS, N.S. Farm manpower. Sheepfarming Annual 1965, 137-142.

A P P E N D I X A

Table 1a

OCCUPATION MAIN EFFECT

Tests of Significance Using Wilks Lambda Criterion

and Canonical Correlations

Test of Roots	F	DF HYP	DF ERR	P less than	R
1 through 4	2.973	80	688.83	0.001	0.755
2 through 4	1.054	57	521.455	0.375	0.397
3 through 4	0.778	36	350	0.819	0.300
4 through 4	0.637	17	175.5	0.859	0.241

Table 1b

OCCUPATION MAIN EFFECT

Univariate F tests and Standardised Discrimination Function Coefficient for the Occupation Main Effect

(untransformed data)

Variable	F(4, 193)	Mean Square	P less than	Discriminating Coefficient
Skill Variety	3.722	2.807	0.006	-0.181
Task Identity	6.010	5.251	0.001	-0.250
Task Significance	0.995	1.532	0.412	-0.326
Autonomy	28.109	27.740	0.001	0.057
Feedback Job	5.347	6.051	0.001	-0.366
Feedback Agents	1.243	2.280	0.294	-0.331
Dealings with Others	0.173	0.273	0.952	-0.020
Experienced Meaningfulness	0.201	1.001	0.937	0.067
Experienced Responsibility	26.601	10.110	0.001	0.642
Knowledge of Results	3.090	19.775	0.017	0.433
General Satisfaction	3.001	45.404	0.020	-0.008
Internal Motivation	1.910	17.966	0.110	-1.032
Pay Satisfaction	4.167	35.770	0.003	-1.028
Security Satisfaction	3.460	55.060	0.009	1.009
Social Satisfaction	2.814	30.095	0.027	0.550
Supervisory Satisfaction	3.331	2.683	0.012	0.154
Growth Satisfaction	7.102	5.549	0.001	-0.254
Would like GNS	0.447	0.472	0.774	-0.212
Job Choice GNS	1.519	0.849	0.198	-0.025
MPS	19.805	74474.500	0.001	1.151

Table 1c

OCCUPATION MAIN EFFECT

Discriminant Scores Contrast

1	1.042
2	1.615
3	-1.046
4	-0.375
5	-1.236

Table 2a

AGE MAIN EFFECT

Tests of Significance Using Wilks Lambda Criterion

and Canonical Correlations

Test of Roots	F	DF HYP	DF ERR	P less than	R
1 through 5	1.306	100	687.657	0.032	0.481
2 through 5	1.172	76	556.704	0.164	0.441
3 through 5	1.028	54	421.518	0.425	0.386
4 through 5	0.910	34	283	0.616	0.338
5 through 5	0.799	16	142	0.685	0.287

Table 2b

AGE MAIN EFFECT

Univariate F tests and

Standardised Discriminant Function Coefficients

Variable	F(5, 159)	Mean Square	P less than	Discriminating Coefficient
Skill Variety	1.230	0.891	0.297	0.051
Task Identity	1.696	1.507	0.139	0.004
Task Significance	4.191	5.929	0.001	0.761
Autonomy	0.908	0.928	0.477	0.479
Feedback Job	0.985	1.076	0.428	0.271
Feedback Agents	2.490	4.015	0.033	-0.465
Dealings with Others	2.502	3.608	0.033	0.147
Experienced Meaningfulness	0.231	1.367	0.948	-0.063
Experienced Responsibility	2.269	0.816	0.050	-0.333
Knowledge of Results	0.502	2.798	0.775	0.548
General Satisfaction	0.406	5.352	0.844	0.694
Internal Motivation	0.298	2.521	0.913	0.425
Pay Satisfaction	0.522	4.031	0.760	0.844
Security Satisfaction	0.436	6.028	0.823	-2.289
Social Satisfaction	0.434	3.916	0.824	-0.185
Supervisory Satisfaction	0.964	80.247	0.441	-0.023
Growth Satisfaction	0.862	68.444	0.508	0.135
Would like GNS	1.792	199.423	0.117	-0.400
Job Choice GNS	0.283	9.753	0.922	-0.032
MPS	1.186	4681.536	0.318	-0.718

Table 2c

AGE MAIN EFFECT

Discriminant Scores Contrast

1	0.058
2	-0.094
3	-1.126
4	0.082
5	0.246
6	0.834

Table 3a

OCCUPATION X AGE INTERACTION

Tests of Significance Using Wilks Lambda Criterion

and Canonical Correlations

Test of Roots	F	DF HYP	DF ERR	P less than	R
1 through 20	1.287	400	2049.538	0.001	0.774
2 through 20	0.989	361	2004.103	0.546	0.572
3 through 20	0.901	324	1953.521	0.884	0.530
4 through 20	0.826	289	1897.500	0.981	0.512
5 through 20	0.743	256	1835.752	0.999	0.439
6 through 20	0.696	225	1767.991	1.000	0.402
7 through 20	0.658	196	1693.951	1.000	0.391
8 through 20	0.611	169	1613.386	1.000	0.353
9 through 20	0.575	144	1526.093	1.000	0.340
10 through 20	0.529	121	1431.922	1.000	0.314
11 through 20	0.482	100	1330.793	1.000	0.270
12 through 20	0.453	81	1222.716	1.000	0.245
13 through 20	0.427	64	1107.805	1.000	0.236
14 through 20	0.382	49	986.301	1.000	0.205
15 through 20	0.340	36	858.578	1.000	0.183
16 through 20	0.285	25	725.157	1.000	0.157
17 through 20	0.213	16	586.704	1.000	0.134
18 through 20	0.076	9	444.018	1.000	0.057
19 through 20	0.049	4	298.	0.995	0.035
20 through 20	0.018	1	149	0.892	0.011

Table 3b

OCCUPATION X AGE INTERACTION

Univariate F Tests and

Standardised Discriminant Function Coefficients

Variable	F(20, 159)	Mean Square	P less than	Discriminating Coefficient
Skill Variety	1.327	0.962	0.169	-0.237
Task Identity	1.954	1.736	0.012	-0.105
Task Significance	1.605	2.271	0.057	-0.479
Autonomy	3.755	3.838	0.001	0.040
Feedback Job	1.441	1.574	0.111	-0.235
Feedback Agents	2.126	3.428	0.005	-0.338
Dealings with Others	1.904	2.747	0.015	-0.022
Experienced Meaningfullness	0.133	0.783	1.000	0.081
Experienced Responsibility	4.649	1.672	0.001	0.816
Knowledge of Results	1.492	8.321	0.090	0.352
General Satisfaction	1.235	16.265	0.233	-0.150
Internal Motivation	0.868	7.341	0.628	-1.069
Pay Satisfaction	1.181	9.124	0.277	-0.760
Security Satisfaction	1.411	19.517	0.124	1.200
Social Satisfaction	1.294	11.667	0.190	0.463
Supervisory Satisfaction	1.029	85.656	0.431	0.104
Growth Satisfaction	1.144	90.779	0.311	-0.399
Would like GNS	1.452	161.607	0.106	-0.120
Job Choice GNS	0.735	25.337	0.785	-0.125
MPS	3.283	12959.659	0.001	1.107

Table 3c

OCCUPATION X AGE INTERACTION

Discriminant Scores Contrast

1	1.068
2	-0.566
3	0.272
4	0.128
5	-0.016
6	0.412
7	0.495
8	0.153
9	-1.423
10	0.314
11	-1.527
12	-2.320
13	-2.600
14	-1.597
15	-0.289
16	-1.753
17	0.382
18	2.009
19	-0.590
20	-0.510

Table 4a

GROWTH NEED MAIN EFFECTS

Tests of Significance Using Wilks Lambda Criterion

and Canonical Correlations

Test of Roots	F	DF HYP	DF ERR	P less than	R
1 through 1	1.875	18	170	0.021	0.407

Table 4b

GROWTH NEED MAIN EFFECTS

Univariate F Tests and

Standardised Discriminant Function Coefficients

Variable	F(1, 187)	Mean Square	P less than	Discriminating Coefficient
Skill Variety	9.322	6.761	0.003	0.308
Task Identity	0.733	0.632	0.393	-0.261
Task Significance	1.378	2.140	0.242	0.170
Autonomy	15.085	14.511	0.001	0.719
Feedback Job	1.955	2.149	0.164	0.222
Feedback Agents	0.139	0.245	0.710	0.048
Dealings with Others	0.010	0.015	0.921	-0.248
Experienced Meaningfulness	0.476	2.395	0.491	-0.185
Experienced Responsibility	17.839	6.684	0.001	0.551
Knowledge of Results	1.613	0.912	0.206	-0.127
General Satisfaction	5.323	3.516	0.022	0.301
Internal Motivation	5.516	2.169	0.020	0.180
Pay Satisfaction	0.306	0.778	0.581	-0.237
Security Satisfaction	0.250	0.369	0.617	0.230
Social Satisfaction	0.643	0.567	0.424	0.091
Supervisory Satisfaction	0.022	0.017	0.881	-0.371
Growth Satisfaction	2.612	2.030	0.108	-0.208
MPS	8.558	30946.824	0.004	-0.430

Table 4c

GROWTH NEED MAIN EFFECTS

Discriminant Scores Contrast

1	-0.345

Table 5a

WITHIN SAMPLE STANDARD DEVIATIONS

OF THE JDS ITEMS

Variable	S.D.
Skill Variety	1.868
Task Identity	.935
Task Significance	1.241
Autonomy	.993
Feedback Job	1.064
Feedback Agents	1.355
Dealings with Others	1.255
Experienced Meaningfulness	2.231
Experienced Responsibility	.617
Knowledge of Results	2.530
General Satisfaction	3.890
Internal Motivation	3.067
Pay Satisfaction	2.930
Security Satisfaction	3.989
Social Satisfaction	3.270
Supervisory Satisfaction	.897
Growth Satisfaction	.884
Would like GNS	1.027
Job Choice GNS	.480
MPS	61.322

A P P E N D I X B

MODIFIED FORMS OF THE JDS

O J P

JOB DIAGNOSTIC SURVEY

AGRICULTURAL VERSION (Form A)

This questionnaire was developed as part of a study of jobs and how people react to them. The questionnaire helps to determine how jobs can be better designed, by obtaining information about how people react to different kinds of jobs.

On the following pages you will find several different kinds of questions about your job. Specific instructions are given at the start of each section. Please read them carefully. It should take no more than 25 minutes to complete the entire questionnaire. Please move through it quickly.

The questions are designed to obtain <u>your</u> own views of your job and <u>your</u> reactions to it.

There are no "trick" questions. Your individual answers will be kept completely confidential. Please answer each item as honestly and frankly as possible.

Thank you for your cooperation.

1.

SECTION ONE

This part of the questionnaire asks you to describe your job, as objectively as you can.

Please do not use this part of the questionnaire to show how much you like or dislike your job. Questions about that will come later. Instead, try to make your descriptions as accurate and as objective as you possibly can.

A **SAMPLE** question is given below.

A. To what extent does your job require you to work with mechanical equipment?

1----------2----------3----------4----------5----------(6)----------7

Very little; the job requires almost no contact with mechanical equipment of any kind.

Moderately

Very much, the job requires almost constand work with mechanical equipment.

You are to circle the number which is the most accurate description of your job.

If, for example, your job requires you to work with mechanical equipment a good deal of the time -- but also requires some paperwork -- you might circle the number six, as was done in the example above.

If you do not understand these instructions, please ask for assistance. If you do understand them, turn the page and begin.

1. To what extent does your job require you to work closely with other people (employees, stock and station agents, farm consultants, or fellow farmers?)

1----------2----------3----------4----------5----------6----------7

Very little; dealing with other people is not at all necessary in doing the job.	Moderately; some dealing with others is necessary.	Very much; dealing with other people is an absolutely essential and crucial part of doing the job.

2. How much autonomy is there in your job? That is, to what extent does your job permit you to decide on your own how to go about doing the work?

1----------2----------3----------4----------5----------6----------7

Very little; the job gives me almost no personal "say" about how and when the work is done.	Moderate autonomy; many things are standardized and not under my control, but I can make some decisions about the work.	Very much; the job gives me almost complete responsibility for deciding how and when the work is done.

3. To what extent does your job involve doing a "whole" and identifiable piece of work? That is, is the job a complete piece of work that has an obvious beginning and end? Or is it only a small part of the overall piece of work, which is finished by other people or by automatic machines?

1----------2----------3----------4----------5----------6----------7

My job is only a tiny part of the overall piece of work; the results of my activities cannot be seen in the final product or service.	My job is a moderate-sized "chunk" of the overall piece of work; my own contribution can be seen in the final outcome.	My job involves doing the whole piece of work, from start to finish; the results of my activities are easily seen in the final product or service.

4. How much variety is there in your job? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?

1----------2----------3----------4----------5----------6----------7

Very little; the job requires me to do the same routine things over and over again.	Moderate variety	Very much; the job requires me to do many different things, using a number of different skills and talents.

5. In general, how significant or important is your job? That is, are the results of your work likely to significantly affect the lives or well-being of other people?

1----------2----------3----------4----------5----------6----------7

Not very significant; the outcomes of my work are not likely to have important effects on other people.	Moderately significant.	Highly significant; the outcomes of my work can affect other people in very important ways.

6. To what extent do fellow-farmers, consultants, stock and station agents, or your bank manager let you know how well you are doing on your job?

1----------2----------3----------4----------5----------6----------7

Very little; people almost never let me know how well I am doing.	Moderately; sometimes people may give me "feedback;" other times they may not.	Very much; managers or co-workers provide me with almost constant "feedback" about how well I am doing.

7. To what extent does doing the job itself provide you with information about your work performance? That is, does the actual work itself provide clues about how well you are doing - aside from any "feedback" other people may provide? e.g. A good crop of wheat or high lambing percentage.

1----------2----------3----------4----------5----------6----------7

Very little; the job itself is such that I could work forever without finding out how well I am doing.	Moderately; sometimes doing the job provides "feedback" to me; sometimes it does not.	Very much; the job is such that I get almost constant "feedback" as I work about how well I am doing.

SECTION TWO

Listed below are a number of statements which could be used to describe a job.

You are to indicate whether each statement is an accurate or an inaccurate description of your job.

Once again please try to be as objective as you can in deciding how accurately each statement describes your job - regardless of whether you like or dislike your job.

Write a number in the blank beside each statement, based on the following scale:

How accurate is the statement in describing your job?

1	2	3	4	5	6	7
Very Inaccurate	Mostly Inaccurate	Slightly Inaccurate	Uncertain	Slightly Accurate	Mostly Accurate	Very Accurate

_____ 1. The job requires me to use a number of complex or high-level skills.

_____ 2. The job requires a lot of cooperative work with other people.

_____ 3. The job is arranged so that I do not have the chance to do an entire piece of work from beginning to end.

_____ 4. Just doing the work required by the job gives me many chances to figure out how well I am doing.

_____ 5. The job is quite simple and repetitive.

_____ 6. The job can be done adequately by a person working alone - without talking or checking with other people.

_____ 7. Fellow farmers, farm consultants, stock and station agents, or my bank manager almost never give me any "feedback" about how well I am doing in my work.

_____ 8. This job is one where a lot of other people can be affected by how well the work gets done.

_____ 9. The job denies me any chance to use my personal initiative or judgement in carrying out the work.

_____10. Other people such as fellow farmers, farm consultants, stock and station agents, or my bank manager often let me know how well they think I am performing the job.

_____11. The job provides me the chance to completely finish the pieces of work I begin.

_____12. The job itself provides very few clues about whether or not I am performing well.

_____13. The job gives me considerable opportunity for independence and freedom in how I do the work.

_____14. The job itself is not very significant or important in the broader scheme of things.

SECTION THREE

Now please indicate how you personally feel about your job.

Each of the statements below is something that a person might say about his or her job. You are to indicate your own, personal feelings about your job by marking how much you agree with each of the statements.

Write a number in the blank for each statement, based on this scale:

How much do you agree with the statement?

1	2	3	4	5	6	7
Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly

_____ 1. It's hard, on this job, for me to care very much about whether or not the work gets done right.

_____ 2. My opinion of myself goes up when I do this job well.

_____ 3. Generally speaking, I am very satisfied with this job.

_____ 4. Most of the things I have to do on this job seem useless or trivial.

_____ 5. I usually know whether or not my work is satisfactory on this job.

_____ 6. I feel a great sense of personal satisfaction when I do this job well.

_____ 7. The work I do on this job is very meaningful to me.

_____ 8. I feel a very high degree of personal responsibility for the work I do on this job.

_____ 9. I frequently think of selling up and going to town.

_____10. I feel bad and unhappy when I discover that I have performed poorly on this job.

_____11. I often have trouble figuring out whether I'm doing well or poorly on this job.

_____12. I feel I should personally take the credit or blame for the results of my work on this job.

_____13. I am generally satisfied with the kind of work I do in this job.

_____14. My own feelings generally are not affected much one way or the other by how well I do on this job.

_____15. Whether or not this job gets done right is clearly my responsibility.

6.

SECTION FOUR

Now please indicate how satisfied you are with each aspect of your job listed below. Once again, write the appropriate number in the blank beside each statement.

How satisfied are you with this aspect of your job?

1	2	3	4	5	6	7
Extremely Dissatisfied	Dissatisfied	Slightly Dissatisfied	Neutral	Slightly Satisfied	Satisfied	Extremely Satisfied

_____ 1. The extent to which I feel I can continue farming as long as I wish to.

_____ 2. My usual level of income.

_____ 3. The amount of personal growth and development I get in doing my job.

_____ 4. The people I talk to and work with on my job.

_____ 5. The degree of respect and fair treatment I receive from my fellow farmers and bank manager.

_____ 6. The feeling of worthwhile accomplishment I get from doing my job.

_____ 7. The chance to get to know other people while on the job.

_____ 8. The amount of support and guidance I receive from others such as fellow farmers, farm consultants, stock and station agents or my bank manager.

_____ 9. The degree to which my income is appropriate to the work I do.

_____10. The amount of independent thought and action I can exercise in my job.

_____11. How secure things look for me in the future on this farm.

_____12. The chance to help other people while at work.

_____13. The amount of challenge in my job.

SECTION FIVE

Now please think of other farmers with farms similar to yours.

Please think about how accurately each of the statements describes the feelings of those farmers about their job.

It is quite all right if your answers here are different from when you described your own reactions to the job. Often different people feel quite differently about the same job.

Once again, write a number in the blank for each statement, based on this scale.

How much do you agree with the statement?

1	2	3	4	5	6	7
Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly

_____ 1. Most farmers feel a great sense of personal satisfaction when they do the job well.

_____ 2. Most farmers are very satisfied with the job.

_____ 3. Most farmers feel that the work is useless or trivial.

_____ 4. Most farmers feel a great deal of personal responsibility for the work they do.

_____ 5. Most farmers have a pretty good idea of how well they are performing their work.

_____ 6. Most farmers find the work very meaningful.

_____ 7. Most farmers feel that whether or not the job gets done right is clearly their own responsibility.

_____ 8. Farmers often think of selling up and going to town.

_____ 9. Most farmers feel bad or unhappy when they find that they have performed the work poorly.

_____ 10. Most farmers have trouble figuring out whether they are doing a good or a bad job.

SECTION SIX

Listed below are a number of characteristics which could be present on any job. People differ about how much they would like to have each one present in their own jobs. We are interested in learning how much you personally would like to have each one present in your job.

Using the scale below, please indicate the degree to which you would like to have each characteristic present in your job.

NOTE: The numbers on this scale are different from those used in previous scales.

4	5	6	7	8	9	10
Would like having this only a moderate amount (or less)			Would like having this very much			Would like having this extremely much

_____ 1. High respect and fair treatment from others such as fellow farmers, farm consultants, stock and station agents and my bank manager.

_____ 2. Stimulating and challenging work.

_____ 3. Chances to exercise independent thought and action in my job.

_____ 4. Great job security.

_____ 5. Very friendly fellow farmers.

_____ 6. Opportunities to learn new things from my work.

_____ 7. High income.

_____ 8. Good fringe benefits.

_____ 9. Opportunities to be creative and imaginative in my work.

_____10. Opportunities to progress to owning a bigger or better farm, to pay off stock firms, and later mortgages.

_____11. Opportunities for personal growth and development in my job.

_____12. A sense of worthwhile accomplishment in my work.

SECTION SEVEN

People differ in the kinds of jobs they would most like to hold. The questions in this section give you a chance to say just what it is about a job that is most important to you.

For each question, two different kinds of jobs are briefly described. You are to indicate which of the jobs you personally would prefer - if you had to make a choice between them.

In answering each question, assume that everything else about the jobs is the same. Pay attention only to the characteristics actually listed.

TWO EXAMPLES are given below

JOB A				JOB B
A job requiring work with mechanical equipment most of the day				A job requiring work with other people most of the day
1	2	(3)	4	5
Strongly Prefer A	Slightly Prefer A	Neutral	Slightly Prefer B	Strongly Prefer B

If you like working with people and working with equipment equally well, you would circle the number 3, as has been done in the example.

* * * *

Here is another example. This one asks for a harder choice - between two jobs which both have some undesirable features.

JOB A				JOB B
A job requiring you to expose yourself to considerable physical danger.				A job located 200 miles from your home and family.
1	(2)	3	4	5
Strongly Prefer A	Slightly Prefer A	Neutral	Slightly Prefer B	Strongly Prefer B

If you would slightly prefer risking physical danger to working far from your home, you would circle number 2, as has been done in the example.

Please ask for assistance if you do not understand exactly how to do these questions.

	JOB A			JOB B
1.	A job where the pay is very good.			A job where there is considerable opportunity to be creative and innovative.
2.	A job where you are often required to make important decisions.			A job with many pleasant people to work with.
3.	A job in which greater responsibility is given to those who do the best work.			A job in which greater responsibility is given to loyal employees who have the most seniority.
4.	A job in an organization or on a farm which is in financial trouble - and might have to close down or sell up within the year.			A job in which you are not allowed to have any say whatever in how your work is scheduled, or in the procedures to be used in carrying it out.
5.	A very routine job.			A job where your co-workers are not very friendly.
6.	A job with a boss who is often very critical of you and your work in front of other people.			A job which prevents you from using a number of skills that you worked hard to develop.

1	2	3	4	5
Strongly Prefer A	Slightly Prefer A	Neutral	Slightly Prefer B	Strongly Prefer B

	JOB A			JOB B
7.	A job with a boss who respects you and treats you fairly.			A job which provides constant opportunities for you to learn new and interesting things.

1	2	3	4	5
Strongly Prefer A	Slightly Prefer A	Neutral	Slightly Prefer B	Strongly Prefer B

8.	A job where there is a real chance you could be laid off.			A job with very little chance to do challenging work.

1	2	3	4	5
Strongly Prefer A	Slightly Prefer A	Neutral	Slightly Prefer B	Strongly Prefer B

9.	A job in which there is a real chance for you to develop new skills and advance in the organization.			A job which provides lots of holiday time and excellent fringe benefits.

1	2	3	4	5
Strongly Prefer A	Slightly Prefer A	Neutral	Slightly Prefer B	Strongly Prefer B

10.	A job with little freedom and independence to do your work in the way you think best.			A job where the working conditions are poor.

1	2	3	4	5
Strongly Prefer A	Slightly Prefer A	Neutral	Slightly Prefer B	Strongly Prefer B

11.	A job with very satisfying team-work.			A job which allows you to use your skills and abilities to the fullest extent.

1	2	3	4	5
Strongly Prefer A	Slightly Prefer A	Neutral	Slightly Prefer B	Strongly Prefer B

12.	A job which offers little or no challenge.			A job which requires you to be completely isolated from co-workers.

1	2	3	4	5
Strongly Prefer A	Slightly Prefer A	Neutral	Slightly Prefer B	Strongly Prefer B

SECTION EIGHT

Biographical Background

1. Sex: Male _____ Female _____

2. Age (check one):

_____ under 20 _____ 40-49

_____ 20-29 _____ 50-59

_____ 30-39 _____ 60 or over

3. Education (check one):

_____ High School

_____ High School - S.C.

_____ High School U.E. or above

_____ Farm Training School - Telford or Flock House

_____ Technical Institute Experience

_____ Some University Experience (other than Technical Institute)

_____ Some Agricultural College Experience

_____ Technical Institute

_____ University or Agricultural College Diploma

_____ University Degree

_____ Agricultural College Degree

_____ Some Graduate Work

_____ Master's or higher degree

4. Describe your farm _____

_____

_____

_____

_____

O J P

JOB DIAGNOSTIC SURVEY

AGRICULTURAL VERSION - Form B

This questionnaire was developed as part of a study of jobs and how people react to them.
The questionnaire helps to determine how jobs can be better designed, by obtaining information about how people react to different kinds of jobs.

On the following pages you will find several different kinds of questions about your job. Specific instructions are given at the start of each section. Please read them carefully. It should take no more than 25 minutes to complete the entire questionnaire. Please move through it quickly.

The questions are designed to obtain <u>your</u> own views of your job and <u>your</u> reactions to it.

There are no "trick" questions. Your individual answers will be kept completely confidential. Please answer each item as honestly and frankly as possible.

Thank you for your cooperation.

1.

SECTION ONE

This part of the questionnaire asks you to describe your job, as objectively as you can.

Please do not use this part of the questionnaire to show how much you like or dislike your job. Questions about that will come later. Instead, try to make your descriptions as accurate and as objective as you possibly can.

A **SAMPLE** question is given below.

A. To what extent does your job require you to work with mechanical equipment?

1----------2----------3----------4----------5----------(6)----------7

Very little; the job requires almost no contact with mechanical equipment of any kind.

Moderately

Very much, the job requires almost constand work with mechanical equipment.

You are to circle the number which is the most accurate description of your job.

If, for example, your job requires you to work with mechanical equipment a good deal of the time -- but also requires some paperwork -- you might circle the number six, as was done in the example above.

If you do not understand these instructions, please ask for assistance. If you do understand them, turn the page and begin.

1. To what extent does your job require you to work closely with other people (other farm employees, stock and station agents, farm advisers and farmers)?

1----------2----------3----------4----------5----------6----------7

Very little; dealing with other people is not at all necessary in doing the job.	Moderately; some dealing with others is necessary.	Very much; dealing with other people is an absolutely essential and crucial part of doing the job.

2. How much autonomy is there in your job? That is, to what extent does your job permit you to decide on your own how to go about doing the work?

1----------2----------3----------4----------5----------6----------7

Very little; the job gives me almost no personal "say" about how and when the work is done.	Moderate autonomy; many things are standardized and not under my control, but I can make some decisions about the work.	Very much; the job gives me almost complete responsibility for deciding how and when the work is done.

3. To what extent does your job involve doing a "whole" and identifiable piece of work? That is, is the job a complete piece of work that has an obvious beginning and end? Or is it only a small part of the overall piece of work, which is finished by other people or by automatic machines?

1----------2----------3----------4----------5----------6----------7

My job is only a tiny part of the overall piece of work; the results of my activities cannot be seen in the final product or service.	My job is a moderate-sized "chunk" of the overall piece of work; my own contribution can be seen in the final outcome.	My job involves doing the whole piece of work, from start to finish; the results of my activities are easily seen in the final product or service.

4. How much variety is there in your job? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?

1----------2----------3----------4----------5----------6----------7

Very little; the job requires me to do the same routine things over and over again.	Moderate variety	Very much; the job requires me to do many different things, using a number of different skills and talents.

5. In general, how significant or important is your job? That is, are the results of your work likely to significantly affect the lives or well-being of other people?

1----------2----------3----------4----------5----------6----------7

Not very significant; the outcomes of my work are not likely to have important effects on other people.	Moderately significant.	Highly significant; the outcomes of my work can affect other people in very important ways.

6. To what extent do your boss or co-workers let you know how well you are doing on your job?

1----------2----------3----------4----------5----------6----------7

Very little; people almost never let me know how well I am doing.	Moderately; sometimes people may give me "feedback;" other times they may not.	Very much; my boss or co-workers provide me with almost constant "feedback" about how well I am doing.

7. To what extent does doing the job itself provide you with information about your work performance? That is, does the actual work itself provide clues about how well you are doing - aside from any "feedback" co-workers or your boss may provide?

1----------2----------3----------4----------5----------6----------7

Very little; the job itself is set up so I could work forever without finding out how well I am doing.	Moderately; sometimes doing the job provides "feedback" to me; sometimes it does not.	Very much; the job is set up so that I get almost constant "feedback" as I work about how well I am doing.

4.

SECTION TWO

Listed below are a number of statements which could be used to describe a job.

You are to indicate whether each statement is an accurate or an inaccurate description of your job.

Once again please try to be as objective as you can in deciding how accurately each statement describes your job - regardless of whether you like or dislike your job.

Write a number in the blank beside each statement, based on the following scale:

How accurate is the statement in describing your job?

1	2	3	4	5	6	7
Very Inaccurate	Mostly Inaccurate	Slightly Inaccurate	Uncertain	Slightly Accurate	Mostly Accurate	Very Accurate

_____ 1. The job requires me to use a number of complex or high-level skills.

_____ 2. The job requires a lot of cooperative work with other people.

_____ 3. The job is arranged so that I do not have the chance to do an entire piece of work from beginning to end.

_____ 4. Just doing the work required by the job gives me many chances to figure out how well I am doing.

_____ 5. The job is quite simple and repetitive.

_____ 6. The job can be done adequately by a person working alone - without talking or checking with other people.

_____ 7. My boss and co-workers on this job almost never give me any "feedback" about how well I am doing in my work.

_____ 8. This job is one where a lot of other people can be affected by how well the work gets done.

_____ 9. The job denies me any chance to use my personal initiative or judgement in carrying out the work.

_____10. My boss often lets me know how well he thinks I am performing the job.

_____11. The job provides me the chance to completely finish the pieces of work I begin.

_____12. The job itself provides very few clues about whether or not I am performing well.

_____13. The job gives me considerable opportunity for independence and freedom in how I do the work.

_____14. The job itself is not very significant or important in the broader scheme of things.

SECTION THREE

Now please indicate how you personally feel about your job.

Each of the statements below is something that a person might say about his or her job. You are to indicate your own, personal feelings about your job by marking how much you agree with each of the statements.

Write a number in the blank for each statement, based on this scale:

How much do you agree with the statement?

1	2	3	4	5	6	7
Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly

_____ 1. It's hard, on this job, for me to care very much about whether or not the work gets done right.

_____ 2. My opinion of myself goes up when I do this job well.

_____ 3. Generally speaking, I am very satisfied with this job.

_____ 4. Most of the things I have to do on this job seem useless or trivial.

_____ 5. I usually know whether or not my work is satisfactory on this job.

_____ 6. I feel a great sense of personal satisfaction when I do this job well.

_____ 7. The work I do on this job is very meaningful to me.

_____ 8. I feel a very high degree of personal responsibility for the work I do on this job.

_____ 9. I frequently think of quitting this job.

_____10. I feel bad and unhappy when I discover that I have performed poorly on this job.

_____11. I often have trouble figuring out whether I'm doing well or poorly on this job.

_____12. I feel I should personally take the credit or blame for the results of my work on this job.

_____13. I am generally satisfied with the kind of work I do in this job.

_____14. My own feelings generally are not affected much one way or the other by how well I do on this job.

_____15. Whether or not this job gets done right is clearly my responsibility.

6.

SECTION FOUR

Now please indicate how satisfied you are with each aspect of your job listed below. Once again, write the appropriate number in the blank beside each statement.

How satisfied are you with this aspect of your job?

1	2	3	4	5	6	7
Extremely Dissatisfied	Dissatisfied	Slightly Dissatisfied	Neutral	Slightly Satisfied	Satisfied	Extremely Satisfied

____ 1. The amount of job security I have.

____ 2. The amount of pay I receive.

____ 3. The amount of fringe benefits I receive.

____ 4. The amount of personal growth and development I get in doing my job.

____ 5. The people I talk to and work with on my job.

____ 6. The degree of respect and fair treatment I receive from my boss.

____ 7. The feeling of worthwhile accomplishment I get from doing my job.

____ 8. The chance to get to know other people while on the job.

____ 9. The amount of support and guidance I receive from my boss.

____10. The degree to which I am fairly paid for what I do.

____11. The amount of independent thought and action I can exercise in my job.

____12. How secure things look for me in the future in this job.

____13. The chance to help other people while at work.

____14. The amount of challenge in my job.

____15. The overall quality of the supervision I receive in my work.

SECTION FIVE

Now please think of the other people who are employed on farms similar to yours.

Please think about how accurately each of the statements describes the feelings of those people about the job.

It is quite all right if your answers here are different from when you described your own reactions to the job. Often different people feel quite differently about the same job.

Once again, write a number in the blank for each statement, based on this scale.

How much do you agree with the statement?

1	2	3	4	5	6	7
Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly

_____ 1. Most people on this job feel a great sense of personal satisfaction when they do the job well.

_____ 2. Most people on this job are very satisfied with the job.

_____ 3. Most people on this job feel that the work is useless or trivial.

_____ 4. Most people on this job feel a great deal of personal responsibility for the work they do.

_____ 5. Most people on this job have a pretty good idea of how well they are performing their work.

_____ 6. Most people on this job find the work very meaningful.

_____ 7. Most people on this job feel that whether or not the job gets done right is clearly their own responsibility.

_____ 8. People on this job often think of quitting.

_____ 9. Most people on this job feel bad or unhappy when they find that they have performed the work poorly.

_____10. Most people on this job have trouble figuring out whether they are doing a good or a bad job.

8.

SECTION SIX

Listed below are a number of characteristics which could be present on any job. People differ about how much they would like to have each one present in their own jobs. We are interested in learning how much you personally would like to have each one present in your job.

Using the scale below, please indicate the degree to which you would like to have each characteristic present in your job.

NOTE: The numbers on this scale are different from those used in previous scales.

4	5	6	7	8	9	10
Would like having this only a moderate amount (or less)			Would like having this very much			Would like having this extremely much

_____ 1. High respect and fair treatment from my boss.

_____ 2. Stimulating and challenging work.

_____ 3. Chances to exercise independent thought and action in my job.

_____ 4. Great job security.

_____ 5. Very friendly co-workers.

_____ 6. Opportunities to learn new things from my work.

_____ 7. High pay.

_____ 8. Good fringe benefits.

_____ 9. Opportunities to be creative and imaginative in my work.

_____10. Quick promotions or opportunities to get better jobs.

_____11. Opportunities for personal growth and development in my job.

_____12. A sense of worthwhile accomplishment in my work.

SECTION SEVEN

People differ in the kinds of jobs they would most like to hold. The questions in this section give you a chance to say just what it is about a job that is most important to you.

For each question, two different kinds of jobs are briefly described. You are to indicate which of the jobs you personally would prefer - if you had to make a choice between them.

In answering each question, assume that everything else about the jobs is the same. Pay attention only to the characteristics actually listed.

TWO EXAMPLES are given below

JOB A				JOB B
A job requiring work with mechanical equipment most of the day				A job requiring work with other people most of the day
1	2	(3)	4	5
Strongly Prefer A	Slightly Prefer A	Neutral	Slightly Prefer B	Strongly Prefer B

If you like working with people and working with equipment equally well, you would circle the number 3, as has been done in the example.

* * * *

Here is another example. This one asks for a harder choice - between two jobs which both have some undesirable features.

JOB A				JOB B
A job requiring you to expose yourself to considerable physical danger.				A job located 200 miles from your home and family.
1	(2)	3	4	5
Strongly Prefer A	Slightly Prefer A	Neutral	Slightly Prefer B	Strongly Prefer B

If you would slightly prefer risking physical danger to working far from your home, you would circle number 2, as has been done in the example.

Please ask for assistance if you do not understand exactly how to do these questions.

	JOB A			JOB B
1.	A job where the pay is very good.			A job where there is considerable opportunity to be creative and innovative.
	1 Strongly Prefer A	2 Slightly Prefer A	3 Neutral	4 Slightly Prefer B	5 Strongly Prefer B
2.	A job where you are often required to make important decisions.			A job with many pleasant people to work with.
	1 Strongly Prefer A	2 Slightly Prefer A	3 Neutral	4 Slightly Prefer B	5 Strongly Prefer B
3.	A job in which greater responsibility is given to those who do the best work.			A job in which greater responsibility is given to loyal employees who have the most seniority.
	1 Strongly Prefer A	2 Slightly Prefer A	3 Neutral	4 Slightly Prefer B	5 Strongly Prefer B
4.	A job in an organization or on a farm which is in financial trouble - and might have to close down/sell up within the year.			A job in which you are not allowed to have any say whatever in how your work is scheduled, or in the procedures to be used in carrying it out.
	1 Strongly Prefer A	2 Slightly Prefer A	3 Neutral	4 Slightly Prefer B	5 Strongly Prefer B
5.	A very routine job.			A job where your co-workers are not very friendly.
	1 Strongly Prefer A	2 Slightly Prefer A	3 Neutral	4 Slightly Prefer B	5 Strongly Prefer B
6.	A job with a boss who is often very critical of you and your work in front of other people.			A job which prevents you from using a number of skills that you worked hard to develop.
	1 Strongly Prefer A	2 Slightly Prefer A	3 Neutral	4 Slightly Prefer B	5 Strongly Prefer B

11.

	JOB A			JOB B
7.	A job with a boss who respects you and treats you fairly.			A job which provides constant opportunities for you to learn new and interesting things.
	1 Strongly Prefer A	2 Slightly Prefer A	3 Neutral	4 Slightly Prefer B	5 Strongly Prefer B
8.	A job where there is a real chance you could be laid off.			A job with very little chance to do challenging work.
	1 Strongly Prefer A	2 Slightly Prefer A	3 Neutral	4 Slightly Prefer B	5 Strongly Prefer B
9.	A job in which there is a real chance for you to develop new skills and advance in the organization.			A job which provides lots of holiday time and excellent fringe benefits.
	1 Strongly Prefer A	2 Slightly Prefer A	3 Neutral	4 Slightly Prefer B	5 Strongly Prefer B
10.	A job with little freedom and independence to do your work in the way you think best.			A job where the working conditions are poor.
	1 Strongly Prefer A	2 Slightly Prefer A	3 Neutral	4 Slightly Prefer B	5 Strongly Prefer B
11.	A job with very satisfying team-work.			A job which allows you to use your skills and abilities to the fullest extent.
	1 Strongly Prefer A	2 Slightly Prefer A	3 Neutral	4 Slightly Prefer B	5 Strongly Prefer B
12.	A job which offers little or no challenge.			A job which requires you to be completely isolated from co-workers.
	1 Strongly Prefer A	2 Slightly Prefer A	3 Neutral	4 Slightly Prefer B	5 Strongly Prefer B

SECTION EIGHT

Biographical Background

1. Sex: Male _____ Female _____

2. Age (check one):

_____ under 20 _____ 40-49

_____ 20-29 _____ 50-59

_____ 30-39 _____ 60 or over

3. Education (check one):

_____ High School

_____ High School - S.C.

_____ High School U.E. or above.

_____ Farm Training School i.e. Telford or Flock House

_____ Technical Institute Experience

_____ Some University Experience (other than Technical Institute)

_____ Some Agricultural College Experience

_____ Technical Institute

_____ University or Agricultural College Diploma

_____ University Degree

_____ Agricultural College Degree

_____ Some Graduate Work

_____ Master's or higher degree

4. What is your job title? _____

5. What sort of farm is the one you are working on? _____

_____